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Wage (in)equality matters: the effect of organizational economic inequality on others' and self-ascriptions

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ABSTRACT

Economic inequality has consequences at the social-psychological level, such as in the way people make inferences about their environment and other people. In the present two preregistered studies, we used a paradigm of an organizational setting to manipulate economic inequality and measured ascriptions of agentic versus communal traits to employees and the self. In Study 1 ($N = 187$), participants attributed more agency than communion to a middle-status employee, and more communion than agency when economic equality was salient. In Study 2 ($N = 198$) this finding was replicated. Further, this inequality-agency association was explained by perceptions of competitive employee relationships. Results, moreover, suggested that participants mainly attributed more communion than agency to themselves in the equality condition. We conclude that agency and communion ascriptions may be functional and thus inform about the expectations people have on the nature of social relationships in the face of economic inequality.

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Agency and communion; competition; economic inequality; equality; social perception

The unequal distribution of income and resources has increased in the majority of societies over the past four decades (Alvaredo et al., 2018; OECD, 2015). Although several factors play a role for this growing economic inequality, one is crucial: the distribution of resources to employees in organizations (Bapuji, 2015; Piketty & Saez, 2003). Indeed, the difference in income between a CEO and a typical medium rank employee in the United States is six times higher than in the 1980s (Institute for Policies Studies, 2021). As highlighted by recent research, the perception of economic inequality impacts social psychological processes (e.g., García-Castro et al., 2020, 2022; García-Sánchez, Obsorne, et al., 2019). In the present work, we make people aware of economic inequality and investigate how it affects individuals' perception of other individuals and the self. More precisely, we aimed to extend the findings on the psychosocial consequences of perceived economic (in)equality by examining its effects on how people perceive others and the self along two key trait dimensions: agency and communion (Abele & Wojciszke, 2007). Growing research has sought to understand the effects of perceived economic inequality on social perception (e.g., Moreno-Bella, Willis, et al., 2022; Tanjitpiyanond et al., 2022). In these studies authors have operationalized inequality on a societal level; that is, how much inequality there is between the rich and the poor (Sánchez-Rodríguez et al., 2019). However, less is known about the effect of perceived economic differences in organizational settings. In two preregistered experiments, we manipulated the size of (in)equality using a pay gap paradigm between employees on different organizational levels and measured whether it affected agency and communion trait-ascriptions to other individuals and the self.

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Psychosocial effects of economic (in)equality

Research on the psychosocial consequences of economic inequality has been growing in recent years. Measured at the country level, higher levels of economic inequality are associated with social problems such as crime (Wilkinson & Pickett, 2009 see also Snowdon, 2010), greater self-enhancement (Loughnan et al., 2011), perceived competitiveness, need for achievement (Sommet et al., 2019), and lower social cohesion (Van de Werfhorst & Salverda, 2012). Regarding ascriptions, economic inequality increases the perceived ambivalence of high- and low-SES individuals: High-SES people are assessed as more competent than low-SES people especially in countries with higher inequality (Durante et al., 2013; 2017).

Displaying certain traits may be a motivated response to a given context. Thus, people may adapt their traits flexibly depending on the demands of a specific situation to succeed. Whether a context is more or less hierarchically organized can influence which self-concepts people come to internalize and how they present themselves to others (Wilkinson & Pickett, 2017). In this way, individuals' self-portrayals may change depending on what appearance or behavior they consider to be crucial in a given setting (Oishi, 2014). Specifically, competition and dominance are perceived appropriate social strategies in a more unequal context, whereas reciprocity and cooperation are seen as more suitable social strategies in more equal contexts (Wilkinson & Pickett, 2017).

Following these observations, experimental studies have shown that perceived economic inequality has causal effects on psychosocial processes. Sánchez-Rodríguez et al. (2019a) showed that when people perceived contexts with higher economic inequality, they described themselves as using an independent self-construal; when economic inequality was lower, an interdependent self-construal was more prominent. Likewise, when inequality is high (vs. low) people perceived a more competitive normative climate (Sánchez-Rodríguez et al., 2019b), and they also tended to ascribe more masculine (vs. feminine) traits to a typical member and to a high-SES member of the unequal society (Moreno-Bella et al., 2019). In this line, other studies have shown that economic inequality shapes the content of social class stereotypes (Connor et al., 2021; Moreno-Bella et al., 2019; Tanjitpiyanond et al., 2022) as well as the content of gender stereotypes (Moreno-Bella, Willis, et al., 2022).

Of interest, the absence of economic inequality – that is, economic equality – and its correlates and consequences have not been the focus of investigations so far. In sociological and correlational studies, different degrees of inequality are measured by indicators of economic inequality (e.g., Gini coefficient). As today there are no totally equal societies (e.g., in which no income gaps exist) a context of complete equality has not been studied. Hence, an alternative to obtain a context of equality, in which people may immerse and interact, are laboratory settings. For instance, Nishi et al. (2015) manipulated equality and inequality through a network public goods game. Their findings suggested that people exposed to an economically equal setting tended to be more cooperative than those who experienced inequality. More recently, García-Castro et al. (2020) experimentally induced participants to perceived economic equality and inequality in their daily life by asking them to think about two familiar people with a similar or different level of wealth, respectively. They observed that those participants who perceived economic equality showed lower intolerance of economic inequality.

Despite the relevance of pay dispersion in organizational settings for the rise of economic disparities at a societal level (Amis et al., 2018; Atkinson, 2015), it has received little attention outside of organizational psychology (Bapuji, 2015; Ronay et al., 2018). An organization in which earnings and social dynamics play a major role could be a relevant context to study the consequences of perceived economic inequality (Moreno-Bella, Kulich, et al., 2022; Stainback et al., 2010). The decline of earnings among low- and middle-wage workers and, at the same time, the increase of high-wage earning gains are clear symptoms of economic inequality, may contribute to the growth of inequality in society (Mouw & Kalleberg, 2010; Saez, 2008). That is, organizations may influence economic inequality at the societal level by implementing unequal wages and rewards (Bapuji et al., 2020). These economic differences at workplaces increase and reinforce economic inequality between citizens over time because it implies an advantage for some people and a disadvantage for others (van Dijk et al.,

2020). Wage inequalities within organizational hierarchies are a reality for most members of organizations and thus likely impact people's psychosocial processes and behaviors (Bapuji, 2015). Indeed, wage inequality was shown to lead to status seeking (Bell & Freeman, 2001) and feelings of unfairness, as well as lower cooperation and job satisfaction in employees (Pfeffer & Langton, 1993). Although it might seem that economic inequality in an organization refers to meritocratic principles assuming that the economic difference between groups of individuals can be justified by their distinct contributions and skills, it is worth mentioning that economic inequality refers also to assigning excessive economic value to certain skills and very little to others. These socially constructed value hierarchies may legitimize social inequalities (van Dijk et al., 2020). Overall, this shows that people may experience and perceived economic inequality in the context of organizations (Bapuji, 2015). Hence, studying the effects of the size of economic differences between employees of different ranks on the ascriptions of socially meaningful traits may reveal more about people's attitudes and behaviors in organizations.

Overall, research suggests that perceived economic inequality promotes competitive behaviors and self and other descriptions with traits that reflect independence and masculinity-oriented traits (Moreno-Bella et al., 2019; Sánchez-Rodríguez et al., 2019). Not only perceived societal economic inequality affects individuals, but perceiving economic inequality within an organization may also have similar effects (Bapuji, 2015). As a point of fact, workplaces often replicate societies' hierarchical structures and highly unequal resource distribution. Thus, unequal pay in organizations and societal economic inequality can be expected to have similar effects on individuals' mindset and behavior (Bratanova et al., 2019). Building upon recent works that highlight the relevance of the perception of economic inequality (Castillo et al., 2022; Phillips et al., 2020; Willis et al., 2022), we sought to extend the knowledge about the effect of perceived economic inequality on social perception by adding organizational settings to its study. Concretely, we aimed to examine how economically (un)equal organizational contexts influence the ascriptions of agency and communion to other individuals and the self.

Two core dimensions of social perception

Prior research has evidenced that two dimensions, agency and communion, underlie the content of human cognition (Abele & Wojciszke, 2019). Different labels have been used to refer to the two contents of person perception: masculinity and femininity (Bem, 1974), instrumentality and expressiveness (Parsons & Bales, 1955), or competence and warmth (Fiske et al., 2002). However, these dimension pairs can be integrated into the agency – communion framework because they share a common core (Abele & Wojciszke, 2007, 2014).

Agency refers to goal achievement and task functioning, putting forward the desire to advance one's own interests, emphasizing qualities such as assertiveness, independence, and dominance. The agentic traits have been typically associated with masculine stereotypes, high status, and powerful people. Communion captures the maintenance of relationships and task functioning and thus refers to the desire for affiliation with others, emphasizing qualities such as helpfulness, trustworthiness, and closeness. Communal features have been typically associated with feminine stereotype, low status and powerless people (Abele & Wojciszke, 2014; Carrier et al., 2014). These two concepts define and structure person perception (Abele & Bruckmüller, 2011), and self-perception (Wojciszke et al., 2011).

According to the dual perspective model of agency and communion (DPM – AC; Abele & Wojciszke, 2014), communal content is more relevant than agentic from the observer perspective, namely, when people perceive other individuals (Wojciszke, Bazinska, et al., 1998). By contrast, from the actor perspective – that is, when people define and perceive themselves – agentic content becomes more relevant and preferable than communal (Wojciszke, Dowhyluk, et al., 1998). The agentic and communal dimensions of social perception have a functional reasoning. While agency reflects people's capability to fulfill their goals and intentions, communion informs about whether people's intentions toward others are good or bad (Fiske et al., 2002, 2007). Thus, it makes sense that observers focus more on communion when evaluating others as they are inferring others' intentions, while actors take more

notice of agentic than communal content when evaluating themselves as they are motivated to follow their own goals (Abele & Wojciszke, 2014). Notwithstanding, from this functional reasoning, contextual factors may constrain the relevance of communion in the social perception of other individuals, such as work-related settings, in which agency becomes crucial (Gartzia, 2021; Wojciszke, Bazinska, et al., 1998).

The present research

Recent evidence depicts the effect of economic inequality on such features related to agentic content (vs. communal) in the social perception of *others*—such as individualism (Sánchez-Rodríguez et al., 2019), competence (Connor et al., 2021), and traditional masculine stereotype (Moreno-Bella et al., 2019), and the *self*—such as independent self-construal and a self-transcendent bias (e.g., Loughnan et al., 2011; Sánchez-Rodríguez et al., 2019). Therefore, departing from all the aforementioned works and including a new social sphere in which economic inequality is present, in two preregistered experiments we predicted that the exposure of participants to various levels of economic inequality (i.e., high inequality, low inequality, and equality) in an organizational context would influence the social perception of others and the self. Agentic ascriptions would therefore be stronger than communal ones in a high-inequality context than in a low-inequality or equality context. This effect was expected for ascriptions to a typical middle-rank employee and to the self. More precisely, we predicted that participants would evaluate the middle-rank employee as having more agentic than communal traits in the higher economic inequality condition, as having little or no difference in the attribution of agency versus communion in the low inequality condition, and as having more communal than agentic traits in the experimental condition of economic equality (Hypothesis 1). We expected the same pattern for self-ascriptions[1]: higher agentic (vs. communal) self-ascriptions in the higher economic inequality condition, small or no differences in the lower inequality condition, and lower agentic (vs. communal) self-ascriptions in the economic equality condition (Hypothesis 2).

In Study 1 and Study 2,[2] we preregistered both hypotheses about the predictions on the middle-rank employee and the self. We also explored possible mechanisms of the effect of economic inequality on the social perception of a middle-rank employee. Prior research has shown that perception of competition in economically unequal contexts is a driver of several cognitive and behavioral outcomes and academics have proposed that competition and cooperation could be different social strategies in economically unequal and equal contexts, respectively (Wilkinson & Pickett, 2017). Indeed, previous studies have reported that perceived competition flows from knowing that high economic inequality exists (Sommet et al., 2021; Sánchez-Rodríguez et al., 2019). In addition, Cheng et al. (2021) and Melita et al. (2021) have shown that perceived competition explains the relationship between economic inequality and psychosocial outcomes, such as social vigilance and status anxiety, respectively. Thus, we examined perceived employee competition and cooperation as explanatory variables of the relationship between economic inequality and agentic – communal content in social perception of others. In Study 2, we improved the experimental manipulation and replicated findings of the previous study. All preregistered hypotheses, data, syntax files, and supplementary materials of the two studies are available in the Open Science Framework (https://osf.io/qrzeb).

Study 1

In Study 1, we aimed to test Hypotheses 1 and 2. Furthermore, we included a measure about the perceived competitive/cooperative relationships between employees to explore a possible explanatory path for the expected effect of economic inequality.

Method

Participants and procedure

We conducted an a priori power analysis to determine the sample size. For a mixed-design, within – between interaction ANOVA, a statistical power of .80, and an effect size of $f = .25$, the minimum

sample size was 135 participants. The participants were 187 students from the University of Geneva (Switzerland). They took part in the study in exchange for course credit. Because two participants did not give their informed consent at the end, and two had missing values, the final sample size was 183 ($n = 153$, females, $M_{age} = 22.98$ years, $SD = 4.82$). The ethics committee of the second author's faculty approved this study.

Materials

Manipulation of economic inequality. We used an organizational paradigm to manipulate economic inequality. We presented a scenario about the roles and functions of employees in the organization. This organization had large (i.e., employees in managerial positions earned 50 times more than those in nonmanagerial positions, indicating higher inequality), small (i.e., employees in managerial positions earned 5 times more than those in nonmanagerial position did, indicating lower inequality), or no differences (i.e., all employees earned the same, indicating equality) in salary and access to resources between the employees in the highest managerial positions and those in nonmanagerial positions (see Supplementary Materials for the experimental manipulations). We randomly assigned participants to one of the three experimental conditions (Higher inequality [$n = 59$] vs. Lower inequality [$n = 58$] vs. Equality [$n = 66$]). We included two manipulation check items. The first asked, "How much do employees with managerial positions in this organization earn in relation to other employees with nonmanagerial positions?." Three response options were reflecting the remuneration differences reported in the different manipulations (*50 times more*, *5 times more*, and *the same*). A second item measured participants' perception of the differences: "How large do you consider the economic differences to be between employees in managerial positions and nonmanagerial positions in this organization?." The item was measured on a 5-point Likert scale ranging from 1 (*very small differences*) to 5 (*very large difference; M* = 3.60, *SD* = 1.54).

Ascriptions to the typical middle-rank employee. Participants were asked to evaluate how they thought the typical middle rank-employee was in terms of agency and communion. We used the 16 traits of Diekman and Eagly (2000), of which eight were agentic (e.g., "dominant," "courageous," α = .72, *M* = 4.07, *SD* = 0.93), and eight were communal traits items (e.g., "warm," "sensitive," α = .87, *M* = 4.31, *SD* = 1.01).

Self-ascriptions. We asked participants to imagine that they had applied for a middle-rank job vacancy in the presented organization, that they had gone through different stages of the staff-selection process, and that they had been invited for a job interview. We then asked them to indicate how they would describe themselves in that interview using the same agentic (α = .77, *M* = 4.28, *SD* = 0.97) and communal traits (α = .86, *M* = 4.81, *SD* = 1.05) we described above.

Perceived competition and cooperation. We asked participants what type of relationship they thought employees of the organization had with the single traits "competitive" (*M* = 4.40, *SD* = 2.10) and "collaborative" (*M* = 3.82, *SD* = 1.96; 7-point scale from 1 [*not at all*] to 7 [*very much*]).[3]

Results

Manipulation checks

We ran a Chi-square test on the categorical manipulation check variable and found a significant main effect, $\chi^2(4, N = 183) = 245.30$, $p < .001$. In the higher inequality condition 88.1% of the participants correctly indicated that the income difference was *50 times higher*; in the lower inequality condition 96.6% correctly indicated that the difference of income was *5 times higher*, and in the equality condition 77% of the participants correctly indicated that there was *no difference* in income and employees earned the same amount.

For perceived economic differences, the continuous manipulation check measure, we ran an ANOVA with economic inequality as the between-groups factor and found a main effect, $F(2, 180) = 115.01$, $p < .001$, $\eta_p^2 = .56$. Post-hoc Bonferroni tests showed that participants perceived that differences between employees in managerial and nonmanagerial positions were greater in the organization with higher economic inequality ($M = 4.71$, $SD = 0.49$) than in the organization with lower economic inequality ($M = 4.19$, $SD = 0.76$; $M_D = 0.52$, 95% CI [0.06, 0.98], $p = .020$) and economic equality ($M = 2.09$, $SD = 1.49$; $M_D = 2.62$, 95% CI [2.18, 3.07], $p < .001$). Finally, economic differences were perceived as greater in the organization with lower economic inequality in comparison to the one with economic equality ($M_D = 2.10$, 95% CI [1.65, 2.55], $p < .001$).

Analysis plan hypothesis testing for hypothesis 1 and hypothesis 2

We preregistered and conducted two mixed-design ANOVAs to analyze the ascriptions to the middle – rank employee and the self. The design was a 3 (Economic inequality: Higher inequality vs. Lower inequality vs. Equality) × 2 (Ascriptions to the target: Agentic vs. Communal), the first variable was a between-groups variable, and the latter was a within-participants variable.[4] The respective targets of ascriptions were (a) a typical middle-rank employee, and (b) the self. The basic statistical assumptions for a mixed design repeated measures ANOVA was satisfied (Pituch & Stevens, 2015). First, the random assignment of participants to each experimental design satisfies the independence assumption. Second, results of Shapiro-Wilk tests (for each one of our continuous variables) indicate that normality assumption is also satisfied ($ps > .05$). Table S2 in the Supplementary Materials reports descriptive statistics for Study 1.

Typical middle-rank employee (hypothesis 1). We found a significant interaction effect between economic inequality and ascriptions to a typical middle-rank employee, $F(2, 180) = 20.83$, $p < .001$, $\eta_p^2 = .19$ (see Figure 1, Study 1 [a]). Decomposing this interaction, we found that in the higher economic inequality condition, participants ascribed more agency than communion to the typical middle-rank employee ($M_D = 0.43$, 95% CI [0.63, 0.79]), $F(1, 180) = 5.35$, $p = .022$, $\eta_p^2 = .03$. In the lower economic inequality condition, no significant differences between agency and communion ascriptions occurred, $F(1, 180) = 0.29$, $p = .588$, $\eta_p^2 < .01$. Finally, in the economic equality condition, participants ascribed less agency than communion to the typical middle-rank employee ($M_D = -1.12$, 95% CI [−1.46, −0.77]), $F(2, 180) = 40.96$, $p < .001$, $\eta_p^2 = .18$. These results fully support Hypothesis 1.

Self-ascriptions (hypothesis 2). A main effect of self-ascriptions showed that participants generally self-ascribed agency ($M = 4.28$, $SD = 0.97$) to a lesser extent than communion ($M = 4.81$, $SD = 1.05$), $F(1, 180) = 21.09$, $p < .001$, $\eta_p^2 = .10$. We also found an interaction between economic inequality and self-ascriptions, $F(2, 180) = 23.06$, $p < .001$, $\eta_p^2 = .20$ (see Figure 1, Study 1 [b]). Post-hoc Bonferroni corrected comparisons showed that in the higher inequality condition, participants did not differ in terms of agency compared to communion self-ascriptions, $F(1, 180) = 1.37$, $p = .243$, $\eta_p^2 < .01$. Participants in the lower economic inequality condition also did not differ in this regard, $F(1, 180) = 1.45$, $p = .230$, $\eta_p^2 < .01$. Finally, participants assigned to the experimental condition of the organization with economic equality self-ascribed less agency than communion ($M_D = -1.47$, 95% CI [−1.82, −1.11]), $F(2, 180) = 67.93$, $p < .001$, $\eta_p^2 = .27$). Thus, our prediction about self-ascriptions was supported in the lower inequality and equality conditions, but not in the high inequality condition.

Exploring the mediating role of competitive/cooperative employee relations

We explored the possible simultaneous mediating role of perceived competition (the "competitive" item) and cooperation (the "collaborative" item) between employees on the relationship between the economic equality and inequality manipulation and trait-ascriptions to the typical middle-rank employee. As a criterion variable, we computed a difference score given that we were interested in the difference between agency and communion in the current research. We calculated the difference score between both dimensions by subtracting the mean of the communal traits from the mean of the

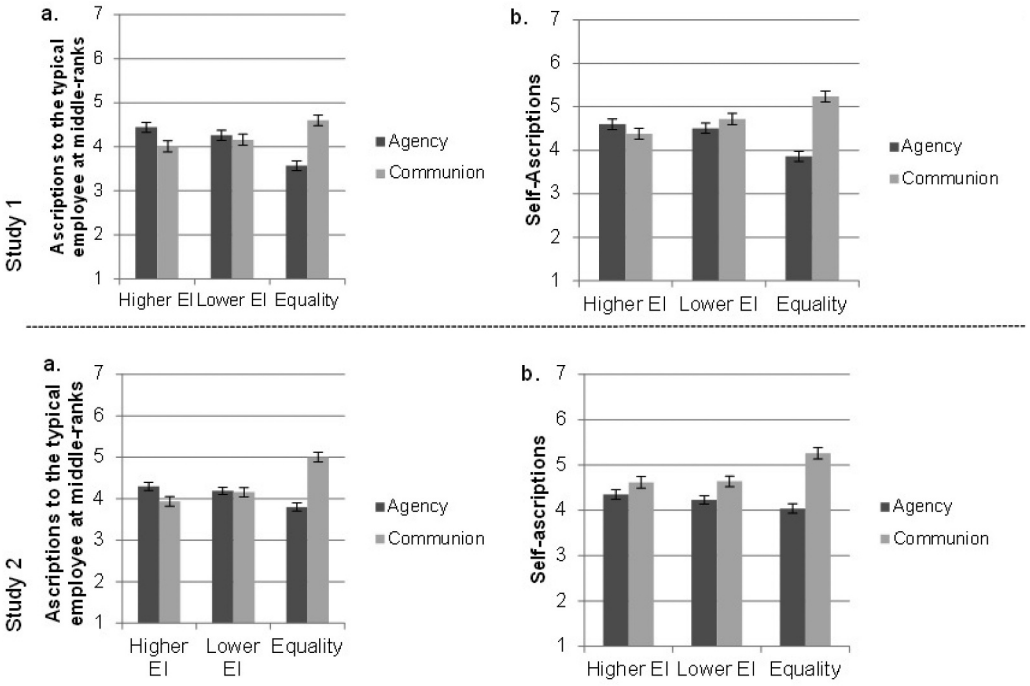

Figure 1. Agentic and communal content as a function of the economic (In)equality condition in pilot study, study 1, and study 2. In *a.* ascriptions to the typical employee at middle-ranks, in *b.* self-ascriptions. EI = Economic inequality.

agentic traits in ascriptions to the employee ($M = -0.23$, $SD = 1.57$). We performed a multiple mediation analysis with the PROCESS macro for SPSS (Model 4), using a bias-corrected bootstrapping for 10,000 resamples and a 95% confidence interval (Hayes, 2013). Economic inequality was coded as an orthogonal contrast, with contrast C1 as a predictor that positioned the higher economic inequality condition (coded as 1) and the equality condition (−1) as opposites, with lower economic inequality (0) situated in between. The residual C2 contrasted higher economic inequality and equality (−1) with lower economic inequality (2). This codification allows us to compare high economic inequality to economic inequality and controlling by the comparison of these with lower economic inequality. Results indicated an indirect effect of economic inequality (C1) on agentic – communal ascriptions (the difference score) to the typical middle-rank employee through perceived competition, $IE = .48$ (.15), 95% CI [0.22, 0.82], but not through perceived cooperation, $IE = -.08$ (.10), 95% CI [−0.13, 0.27]. See Figure 2.

Discussion

The present findings indicate that agency and communion attributions to middle-status individuals are socially relevant dimensions affected by the economic inequalities of the context, in this case, a working organization. Particularly, agency seemed to be perceived as a dominant dimension in contexts of higher economic inequality, whereas communion was perceived as the norm in equal settings. Hence, results of Study 1 confirm Hypothesis 1. Our findings suggest that participants might use indicators of economic inequality to predict what type of traits (i.e., agentic or communal) would be the norm among average employees within an organizational setting. The fact that agency ascriptions tended to be higher in more economically unequal contexts and communion ascriptions higher in more equal settings, as expected in Hypothesis 1, may come from expectations that link inequality to competitive

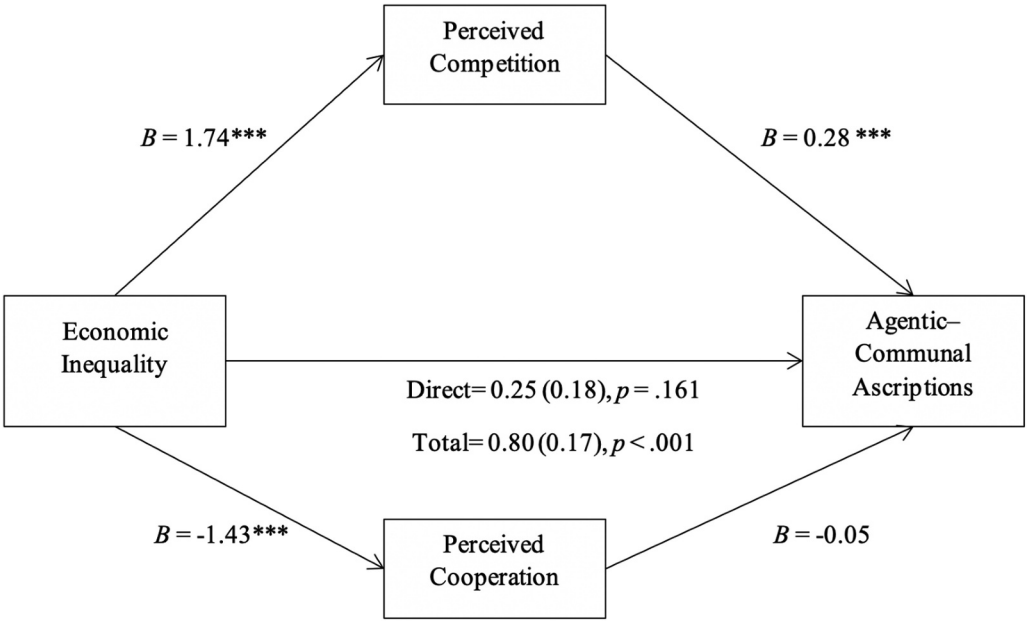

Figure 2. Multiple mediation analysis (Study 1): perceived competition (but not perceived collaboration) as the mediator of the relationship between perceived economic inequality and agentic-communal ascriptions to the typical employee at middle-ranks. Perceived economic inequality (EI) was coded as a linear effect (C1) coded as higher EI = 1, lower EI = 0, equality = -1. This model controlled for the orthogonal residual contrast (C2), coded as higher EI and equality = -1, lower EI = 2. *$p < .05$, **$p < .01$, ***$p < .001$.

relations and equality to cooperative relations (Nishi et al., 2015; Sánchez-Rodríguez et al., 2019). Exploratory mediational analyses showed that the higher perceived competition among employees in the more unequal context explained the higher agentic rather than communal ascriptions to typical middle-rank employees.

Concerning self-ascriptions, differences only occurred in the economic equality condition, not in the inequality conditions, disconfirming Hypothesis 2. Previous research suggest that, generally, agency is the dominant dimension of content in self-perception (Abele & Wojciszke, 2014). Moreover, under high economic inequality, self-perception is more oriented toward agency as indicating higher self-enhancement (Loughnan et al., 2011) and independent self-construal (Sánchez-Rodríguez et al., 2019). Thus, theoretically, the prevalence of agency (vs. communion) in self-ascriptions would be expected under high economic inequality, an effect that we have not found in our study.

Study 2

To provide more evidence on the impact of perceived economic (in)equality in organizations on agency-communion ascriptions (to a middle-status employee) and self-ascriptions, as well as on the role of perceived competitive and cooperative relationships, we conducted a second preregistered study with a new experimental manipulation of economic (in)equality. We controlled for other possible inferences related to the organizations (e.g., profit or nonprofit; Aaker et al., 2010). Again, we made the same predictions for examining the effect of perceived economic inequality or equality on the ascriptions to a middle-rank individual (Hypothesis 1), and the participant's self-ascriptions (Hypothesis 2). Likewise, to overcome possible limitations regarding people's inferences about the organization, we asked participants about their perceptions of the organization (see Supplementary Materials).

Method

Participants and procedure

We collected 201 responses from students from the University of Geneva (Switzerland). They took part in the study in exchange for course credit. Because one participant did not indicate to give their informed consent at the end and two had missing values, the final sample size was 198 ($n = 164$ females; $M_{age} = 21.84$ years, $SD = 2.92$). This study was approved by the ethics committee of the university's Faculty of Psychology and Educational Sciences. We conducted a sensitivity power analysis[5] for a mixed-design ANOVA, with our sample size ($N = 198$) and a statistical power of .80 the minimum effect size that we can detect is $f = 0.18$.

Materials

Manipulation of economic inequality. We used the scenarios of Study 1 with some minor modifications. The first addressed the potential limitation that people likely thought about a nonprofit organization (e.g., a non-governmental organization [NGO]) when they read about economic equality, and about a lucrative organization when they read about inequality. To ensure that this was not a confounding factor in our experimental design, we controlled this information by pointing out to participants across all conditions that the organization was lucrative in nature and not an NGO. Similarly, to avoid possible perceived differences in the work setting, we included information on several potential dimensions that could be related to the equality/inequality concept. Thus, we informed all participants (assigned to all experimental conditions: Higher inequality [$n = 63$] vs. Lower inequality [$n = 72$] vs. Equality [$n = 63$]) that employees worked the same number of hours regardless of their status, that the employees' salary satisfaction was comparable to that in other organizations, that the salaries did not necessarily reflect power and status differences, and that the organization applied a modern payment method (see Supplementary Materials). We used the same two manipulation check items used in Study 1. The first one was the item with the three response options (*50 times more*, *5 times more*, and *the same*). And the second item measured participants' perception of the differences on a 5-point Likert scale ranging from 1 (*very small differences*) to 5 (*very large differences*; $M = 3.61$, $SD = 1.51$).

Ascriptions to the typical employee in the middle-ranks. Similar to Study 1, we used the traits scale of Diekman and Eagly (2000; eight agentic, $\alpha = .67$, $M = 4.10$, $SD = 0.79$; and eight communal, $\alpha = .89$, $M = 4.36$, $SD = 1.01$).

Self-ascriptions. We presented the interview scenario from Study 1 and measured agentic ($\alpha = .70$, $M = 4.21$, $SD = 0.83$) and communal ($\alpha = .86$, $M = 4.83$, $SD = 1.04$) self-ascriptions.

Perceived competition and cooperation. We asked participants what type of relationship they thought employees of the organization had with the single traits "competitive" ($M = 4.36$, $SD = 2.07$) and "collaborative" ($M = 3.85$, $SD = 1.76$; 7-point scale from 1 *not at all* to 7 *very much*).

Results

Manipulation checks

We conducted a Chi-square test on the categorical manipulation check variable, and found a significant main effect, $\chi^2(4, N = 198) = 311.28$, $p < .001$. In the higher inequality condition 96.6% of the participants correctly indicated that the income difference was 50 times higher, in the lower inequality condition 83.7% correctly indicated that the difference of income was 5 times higher, and in the equality condition 100% of the participants correctly indicated that there was no difference in income.

For perceived economic differences (continuous manipulation check measure), we computed an ANOVA with economic inequality as the between-groups factor and found a main effect, $F(2, 195) = 255.11$, $p < .001$, $\eta_p^2 = .72$. Post-hoc Bonferroni corrected comparisons revealed that participants perceived greater differences in salary between employees in managerial and nonmanagerial positions in the organization with higher economic inequality ($M = 4.71$, $SD = 0.55$) compared to the lower economic inequality ($M = 4.26$, $SD = 0.53$; $M_D = 0.45$, 95% CI [0.12, 0.78], $p = .004$), and the economic equality ($M = 1.75$, $SD = 1.18$; $M_D = 2.97$, 95% CI [2.62, 3.31], $p < .001$) conditions. The latter two differed significantly ($M_D = 2.52$, 95% CI [2.18, 2.85], $p < .001$).

Analysis plan hypothesis testing for hypothesis 1 and hypothesis 2

We conducted two mixed-design ANOVAs to analyze the ascriptions to the target (a middle-rank employee and the self). As in our previous study, the design was 3 (Economic inequality: Higher inequality vs. Lower inequality vs. Equality) × 2 (Ascriptions to the target: Agentic vs. Communal), with the last variable as a within participants variable.[6] Table S3 in the Supplementary Materials reports descriptive statistics for Study 2. The basic statistical assumptions for a mixed design repeated measures ANOVA were also satisfied in this study (Pituch & Stevens, 2015).

Typical middle-rank employee (hypothesis 1). The findings revealed a main effect of ascriptions, $F(1, 195) = 8.72$, $p = .004$, $\eta_p^2 = .04$. Middle-rank employees were perceived as more communal ($M = 4.35$, $SD = 1.01$) than agentic ($M = 4.10$, $SD = 0.79$). We also observed an interaction between economic inequality and ascriptions to a typical middle-rank employee, $F(2, 195) = 27.02$, $p < .001$, $\eta_p^2 = .22$ (see Figure 1, Study 2 [a]).

Post-hoc Bonferroni corrected comparisons showed that, in the higher economic inequality condition, participants ascribed more agency than communion to a typical middle-rank employee ($M_D = 0.37$, 95% CI [0.06, 0.69]), $F(1, 195) = 5.48$, $p = .020$, $\eta_p^2 = .03$. In the lower economic inequality condition, no significant differences occurred, $F(1, 195) = 0.26$, $p = .861$, $\eta_p^2 < .01$. Participants assigned to the equality condition ascribed less agency than communion to typical middle-rank employees ($M_D = -1.20$, 95% CI [−1.51, −0.88]), $F(2, 195) = 56.42$, $p < .001$, $\eta_p^2 = .22$. These results fully support Hypothesis 1.

Self-ascriptions (hypothesis 2). As in the prior study, we observed a main effect of ascriptions $F(1, 195) = 48.75$, $p < .001$, $\eta_p^2 = .20$. Participants perceived themselves as less agentic ($M = 4.20$, $SD = 0.83$) than communal ($M = 4.82$, $SD = 1.04$). Of importance, we found an interaction effect between economic inequality and ascriptions, $F(2, 195) = 10.39$, $p < .001$, $\eta_p^2 = .10$ (see Figure 1, Study 2 [b]).

Post-hoc Bonferroni corrected comparisons revealed that participants assigned to the experimental condition of high economic inequality did not differ in self-ascriptions of agency and communion ($M_D = -0.27$, 95% CI [−0.58, 0.04], $F(1, 195) = 2.89$, $p = .091$, $\eta_p^2 = .02$). In the low economic inequality condition, participants ascribed agency to themselves to a lesser extent than communion ($M_D = -0.41$, 95% CI [−0.70, −1.11]), $F(1, 195) = 7.30$, $p = .007$, $\eta_p^2 = .04$). Likewise, in the equality condition, they ascribed less agency than communion to themselves ($M_D = -1.22$, 95% CI [−1.53, −0.90]), $F(1, 195) = 57.95$, $p < .001$, $\eta_p^2 = .23$). These results do not support Hypothesis 2 in the high and low inequality conditions, but they support Hypothesis 2 in the equality condition.

Exploring the mediating role of competitive/cooperative employee relations

As in Study 1, we explored the possible simultaneous mediating role of perceived competition and cooperation between employees on the relationship between the economic equality and inequality manipulation and agency – communion ascriptions (the difference score) to middle-rank employees. We computed the difference score by subtracting the mean of the communal traits from the mean of the agentic traits in ascriptions of such employees ($M = -0.25$, $SD = 1.42$). We followed the same procedure to perform a multiple mediation analysis using the PROCESS macro for SPSS (Model 4). The results indicated an indirect effect of economic inequality (C1) on agentic –

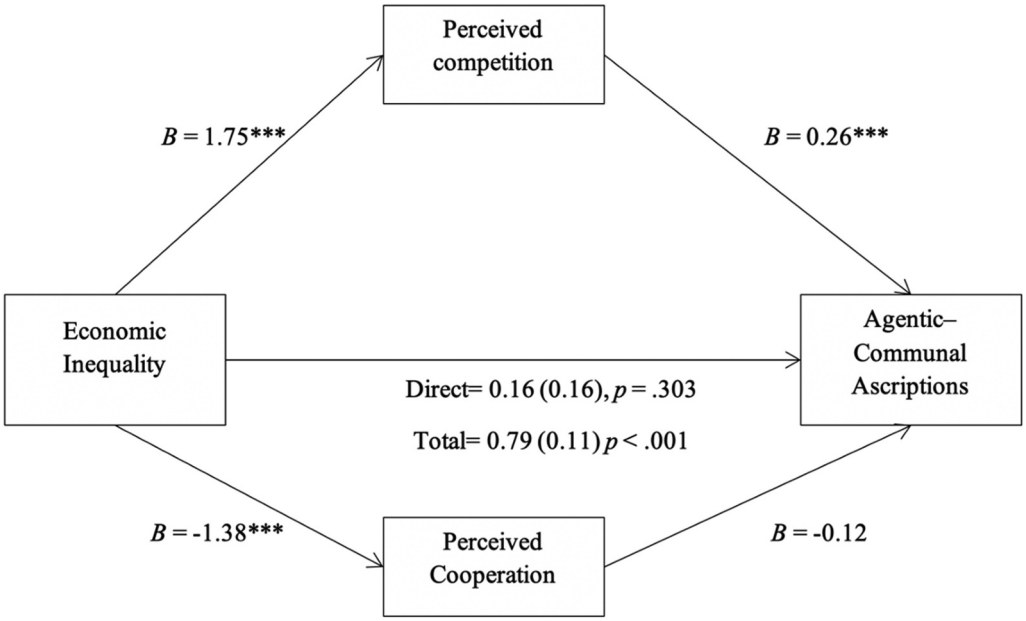

Figure 3. Multiple mediation analysis (Study 2): perceived competition (but not perceived collaboration) as the mediator of the relationship between perceived economic inequality and agentic-communal ascriptions to the typical employee at middle-ranks. Perceived economic inequality (EI) was coded as a linear effect (C1) coded as higher EI = 1, lower EI = 0, equality = -1. This model was control for the orthogonal residual contrast (C2), coded as higher EI and equality = -1, lower EI = 2. *$p < .05$, **$p < .01$, ***$p < .001$.

communal ascriptions to typical middle-rank employees through perceived competition, $IE = .46$ (.10), 95% CI [0.21, 0.38], but not through perceived cooperation, $IE = -.16$ (0.11), 95% CI [−0.04, 0.39]. See Figure 3.

Discussion

In this last study, we controlled in the experimental manipulation several potential factors that could have produced variations in perceptions of organizations with unequal or equal pay systems such as the type of the organization (company versus nonprofit organization, or work conditions). Despite these variations, we replicated our previous findings showing higher agentic compared to communal ascriptions to an employee in the context of high remuneration inequality. In the low inequality condition, we found no differences, whereas in the equality condition, we observed that agentic ascriptions were lower than communal ascriptions.

As in Study 1, we did find complete support for Hypothesis 2 concerning self-ascriptions, given that findings did not suggest agency – communion differences when economic inequality was high, and communal self-ascriptions seemed to be higher than agentic ones in the low inequality and equality conditions.

Finally, we replicated that perception of competitiveness in employees' relationships played a role for the agency-inequality association. Future research should directly investigate the role of perceived competition and cooperation by manipulating the organizational climate and thus clearly disentangling them from agency and communion perceptions of employees.

Robustness check

Given that we used the same measures across the different experimental studies, and included three experimental conditions, we ran a mini meta-analysis of our studies (Cumming & Calin-Jageman,

Table 1. Results of the mini meta-analysis of the simple effects within experimental conditions.

	High EI			Low EI			Equality		
	M r	*Z*	*p*	*M r*	*Z*	*p*	*M r*	*Z*	*p*
Typical Middle-Rank Employee	.20	2.73	.006	.03	.44	.656	.41	5.79	<.001
Self-Ascriptions	.08	1.11	.266	.12	1.61	.107	.47	6.64	<.001

M r = Mean weighted correlation.

2016; Goh et al., 2016)—including the Pilot Study – to test the robustness of the effect of economic inequality on ascriptions and self-ascriptions.

Typical middle-rank employee

We meta-analyzed our three studies (Pilot Study, Study 1, and Study 2) using fixed effects in which the mean effect sized was weighted by sample size. We converted the partial eta square into Pearson's correlation for facilitating the analyses and presentation. Results showed that the Economic inequality × Ascriptions to the Typical Middle-Rank Employee interaction effect was significant, $M\ r = .42$, $Z = 10.47$, $p < .001$ (two-tailed). We also meta-analyzed the interaction in a more comprehensive way. We converted the partial eta square of the effect of the within-effect in each experimental condition. We observed that the agency-communion difference was stable in the high and equality conditions across the studies (see Table 1).

Self-ascriptions

To test whether the Economic inequality × Self-ascriptions interaction effect maintained significant across the studies, we repeated the same procedure to meta-analyze our three studies. We observed that the interaction between economic inequality and self-ascriptions was significant, $M\ r = .34$, $Z = 8.39$, $p < .001$ (two-tailed). We also observed that the agency-communion difference was stable in the equality condition across the three studies (see Table 1).

General discussion

The present studies showed that agency ascriptions to middle-status targets are higher than communal ones in organizational unequal contexts. These findings are in line with the previous literature that showed that contexts of higher economic inequality led to perceive an agentic normative climate and to ascribe the people traits related to agency (Moreno-Bella et al., 2019; Sánchez-Rodríguez et al., 2019). We corroborated past research with the novelty that the effect also occurs in organizational contexts and in comparison with an equality situation. Furthermore, in the case of social perception of the middle-rank employees, the perception of competition mediated this association. These findings are important because descriptive norms influence people's attitudes and behaviors (Cialdini et al., 1990). Considering that economic inequality increases social comparisons (Cheung & Lucas, 2016, 2020), people who take part in such unequal settings could modify their attitudes toward others depending on that descriptive norm (Sánchez-Rodríguez et al., 2023) for instance, this might undermine cooperation and increase disruptive behaviors among employees within an organization (Bratanova et al., 2019).

To our knowledge, the present research is the first to test the impact of equality in comparison to inequality on the ascription of agentic and communal traits to employees. These novel findings add to past research by showing that economic equality has positive effects on cohesion and cooperation (Nishi et al., 2015). In line with the work of Wilkinson and Pickett (2017), communal self-ascriptions may be functional in a context with equality in the distribution of income and resources, where cooperation is more appropriate as a social strategy. Even if such "equal" scenarios are still utopic, knowing how people react to and act within such settings is of interest in terms of considering whether society should strive for such features.

We should mention that the predominance of communal (vs. agentic) self-ascriptions in all studies, may appear to contradict previous findings (e.g., Abele & Wojciszke, 2007). The DPM-AC (Abele & Wojciszke, 2014) proposes that from the actor perspective, the agency is more important than the communal dimension. Therefore, the main effect of the type of ascriptions should have revealed that self-ascriptions are mainly agency oriented rather than communion oriented. However, in general, we observed dominance of communal self-ascriptions. A possible explanation of this disparate result has already been advanced before in the agency-communion literature. Abele and Wojciszke (2014) suggested that communal traits may be more relevant for social approval; therefore, people tend to build their reputation mainly on the communal dimension. Taking a more functional perspective, the participants might have intended to present themselves in a more positive light by exaggerating the communal traits in their self-ascriptions because they hoped this might increase social approval in that context. However, in the organizational context, creating a good image based on agency rather than communion might be more beneficial for the individual (Gartzia, 2021). To clarify this, further research may examine under what concrete circumstances there is a delimitation of the dominance of agentic and communal self-ascriptions.

In our studies, we attempted to create the same status hierarchy in all experimental conditions (i.e., high-, middle-, and low-rank employees). Therefore, the economic gap between workers (but not the differences in status per se) could be an important clue regarding what influences the social ties between workers with different statuses in organizations. In relation to this, previous research has suggested that high economic differences between highest- and middle-rank employees lead the latter to perceive more social distance between themselves and the leader (Peters et al., 2019). Additionally, we have shown organizational economic inequality may have similar effects on people's social perceptions as societal economic inequality has. However, we encourage further research to examine this effect using different hierarchical dynamics, such as social dynamics with close friends with different resources (García-Castro et al., 2020, 2021).

Our findings have implications for the consequences of economic (in)equality and the maintenance of stereotypical social representations. In unequal organizational contexts, workers are expected to have characteristics of agency rather than communion (Fiske et al., 2002). Consequently, minority groups (e.g., women) who do not fit the agentic worker stereotype of traditional organizational settings (Eagly & Karau, 2002) would likely perceive higher compatibility between them and the expected profile in more equal settings, but also influence in the same way employer's assessment (Stainback et al., 2010). More equal organizational contexts where communal qualities prevail over masculine attributes may allow for gender incongruent behaviors and attitudes (Kulich & Chipeaux, 2019). Apart from that, recent studies have shown that economic inequality affects the content of social perception of individuals with different social classes, which in turn influence redistributive wealth policies (Tanjitpiyanond et al., 2022). Hence, building on these findings, we encourage further research to examine whether agentic and communal content of social perception could affect the support for organizational policies more oriented to income and gender equality depending on the perception of organizational economic inequality. Moreover, our studies are also in line with other research that highlight the relevance of agency and communion in the social perception of organizations and, beyond that, its consequences in business decision making (Macchione et al., 2022).

Nonetheless, there are some limitations that should be acknowledged. The first one comes from the mediational model. In both studies we observed an indirect effect of economic inequality on agentic – communal ascriptions to typical middle-rank employees through perceived competition. Despite this result supporting previous studies on the explanatory role of perceived competition (e.g., Cheng et al., 2021), in future studies perceived competition should be manipulated in order to ascertain our proposed causality between the mediator and the outcome variable (Pirlott & MacKinnon, 2016). Further, this could rule out the possibility of the influence of third variables on the results. That being said, we should be cautious when interpreting the effect of competition on the agentic – communal ascriptions because it could be an operational overlapping with the agentic traits inventory (Diekman & Eagly, 2000). Not only competition but other variables that reflect social and psychological distance/cohesion may

be considered when studying economic inequality, such as self-construal (Sánchez-Rodríguez et al., 2019). Indeed, recent studies have shown that self-construal explains the effect of economic threat on different psychosocial outcomes (Del Fresno-Díaz et al., 2022). A second limitation of our studies is the lack of the assessment of participants' political orientation. Future studies may consider participants' political orientation and other ideology-related variables as moderators (Rodríguez-Bailón et al., 2017; Willis et al., 2015). In the present study, we did not include political orientation, however, we controlled in our analyses for social dominance orientation as an ideology-related variable which strongly related to economic inequality (García-Sánchez, Van der Toorn, et al., 2019).

In sum, our research contributes to the literature about economic inequality and its social psychological consequences. We used a new experimental manipulation of economic inequality in an organization and measured whether it affects agentic/communal ascriptions to other targets and to oneself. Our findings suggest that people make ascriptions to middle-status individuals predominantly oriented to the agentic dimension under economic inequality. Further, this is explained by the perception relationships based on competition. This research allows to understand the effect of economic inequality on people's social perception in an organizational environment.

Notes

1. We have slightly edited the statements of our hypotheses in the preregistrations to be consistent and facilitate the comprehension of hypotheses across all studies in the article, but we have not changed the direction of our predictions.
2. We carried out a Pilot Study to test the experimental manipulation of economic inequality in the organizational setting. To see descriptive statistics of Pilot Study (Table S1) and results, see Supplementary Materials in Open Science Framework (OSF; https://osf.io/qrzeb).
3. We also measured sociodemographic data (e.g., gender, income level) and – with a different purpose – participants' meritocratic beliefs (α = .29; Pratto et al., 2012) and social dominance orientation (α = .82; Goode & Keefer, 2016).
4. Additional analyses including participants' sociodemographic data and social dominance orientation showed similar results (see Supplementary Materials). We did not include meritocratic beliefs as a covariate given that the measure used did not accurately assess the construct.
5. An a priori power analysis was preregistered and based on orthogonal contrast.
6. We preregistered orthogonal contrasts. However, to address our current research question based on the within comparison of the ascriptions and to be consistent with how we presented our results in the Pilot Study and Study 1, we deviated from the preregistration and followed the same mixed-design ANOVA used in Pilot Study and Study 1.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Availability of data and material

The datasets of the current research and its supplementary information are available in Open Science Framework (https://osf.io/qrzeb).

Consent to participate

Informed consent was obtained from all individual participants included in the study.

Consent for publication

Participants gave their consent to use their anonymized responses for a future publication in a scientific journal.

Ethics approval

The studies were performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. The studies were also approved by the ethical committee of the University of Geneva.

Data availability statement

The data that support the findings of this study are openly available in Open Science Framework at https://osf.io/qrzeb.

Open scholarship

This article has earned the Center for Open Science badges for Open Data, Open Materials and Preregistered. The data and materials are openly accessible at https://osf.io/qrzeb

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