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Older workers' representation and age-based stereotype threats in the workplace

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Abstract

Purpose – The purpose of this paper is to examine the extent to which negative age-based metastereotypes mediate the relationship between the representation of older workers and two forms of stereotype threat in the workplace: own-reputation and group-reputation. Adopting a social identity perspective, this paper also explores whether age diversity beliefs moderate the relationship between negative age-based metastereotypes and stereotype threats.

Design/methodology/approach – A cross-sectional design was adopted with bootstrapped mediation and moderation analyses. The data were collected from 567 older workers working in 15 manufacturing companies.

Findings – The analyses provide support for partial mediation and for a moderation effect of age diversity beliefs in the relationship between negative age-based metastereotypes and own-reputation threat. The results hold while controlling for age, objective organizational age diversity, and organizational tenure.

Research limitations/implications – The limitations of this study include its cross-sectional nature and the need for further work regarding older workers' metastereotypes about middle-aged workers.

Practical implications – For stereotype threat interventions to be effective they must identify beforehand the target and the source of the threat. Moreover, interventions should aim for the development of a sense of identity on the organization as it may pave the way for members of different age groups to build bonds and for intergenerational boundaries to be blurred.

Originality/value – This paper contributes to the literature by showing the importance of negative age-based metastereotypes in workplace age dynamics. It also provides further support for a multi-threat approach to the experience of age-based stereotype threats in the workplace.

Keywords Older workers' representation, Negative age-based metastereotypes, Age-based stereotype threats, Age diversity beliefs

Paper type Research paper

Introduction

In recent years, the relative weight of older people in the labor force has been rising in most European countries, and more older people are now available to work (European Commission, 2014; Schröder *et al.*, 2014). Besides, some governments are providing incentives (e.g. tax exemptions) to increase the older workers' labor force participation rate given that the early retirement scheme is no longer sustainable (Eurofound, 2013). The aging of the workforce is putting age under the spotlight as it becomes a more salient social category for self-categorizing and for sub-grouping. Guillaume *et al.* (2014) draw attention to the likelihood of increasing ethnocentric and discriminatory behaviors as social groups compete for scarce resources. Hence, growing social tensions between older and younger workers cannot be discarded.

The literature presents a wide range of negative age stereotypes about older workers (e.g. Ng and Feldman, 2012; Posthuma and Campion, 2009). Against this aging shadow, older workers are likely to experience age-based stereotype threats in the workplace (Kalokerinos *et al.*, 2014; Kray and Shirako, 2011). Most studies on stereotype threats



conceptualize this threat as unidimensional and representing a concern for the stigmatized group (Shapiro *et al.*, 2013). Yet, Shapiro and Neuberg (2007) contend in their multi-threat framework that stereotype threat experience entails distinct processes that are contingent on the source and target of the threat. For instance, stereotype threats may target the stigmatized worker self-image above and beyond the ingroup reputation. Recent work by Shapiro *et al.* (2013) focused on the relationship between stereotype threat interventions and the target of the stereotype threat dimension concluding that, to be effective, interventions have to address the specific target of the threat.

Stereotype threat research frames stereotyping beyond the individual level as it offers contextual and situational interpretations of the nomological network of societal stereotypes (Kray and Shirako, 2011; Shapiro, 2011; Steele *et al.*, 2002). The stereotype threat nomological network is comprised of several stereotype threat forms, antecedents, boundary conditions, attitudinal and behavioral consequences (Kray and Shirako, 2011; Shapiro, 2011; Steele *et al.*, 2002). This network specifies linkages and theoretical propositions between stereotype threat and each relevant construct. Important to our study are two stereotype threat eliciting factors: older workers' representation and negative age-based metastereotypes. Also, the moderating effect of age diversity beliefs in the stereotype threat experience is examined. In this way, this study analyses the interrelationships between five constructs of the stereotype threat nomological network.

Despite the growing proportion of older workers in the labor force, members of this social group may lack a sense of belonging when underrepresented in a particular organization. Moreover, the imbalance of age groups in an organization may trigger a sense making process of this discrepancy among underrepresented group members that would make them feel socially threatened and perceiving an insufficient valorization of their contribution to the organization. The numeric underrepresentation of stigmatized groups such as older workers might enhance their stigmatized status, thus triggering feelings of stereotype threat (Bragger *et al.*, 2014; Kalokerinos *et al.*, 2014; Steele *et al.*, 2002). In addition, tensions between younger and older workers are likely to be intensified by negative age-based metastereotypes, best described as negative beliefs about what other age groups think of one's group (Finkelstein *et al.*, 2013, 2015). According to Voyles *et al.* (2014), age-based metastereotypes should be viewed as first-order triggers of the stereotype threat process. Thus, besides being an antecedent of stereotype threat at work, underrepresentation may also influence the age-based metastereotyping process since the age distribution of the organizational members makes age a more striking social category. Moreover, research has pointed out boundary conditions that aggravate or alleviate stereotype threats (Steele *et al.*, 2002).

Particularly relevant for the current study is the concept of age diversity beliefs. Diversity beliefs reflect the extent to which an individual perceives diversity in a specific setting as an advantage rather than a risk (Homan *et al.*, 2010). Similar to other diversity categories, such as cultural diversity, age diversity may be viewed as a double-edged sword that creates both opportunities and challenges for organizations and for employees. That being the case, differences in age diversity beliefs may play a relevant role in determining vulnerability to stereotype threat, and its outcomes. Cognitions about diversity may influence both positively and negatively the effects of objective age diversity. On the one hand, they can hamper identity threats posed by social categorization. On the other hand, negative diversity beliefs make age bias more salient reinforcing its harmful consequences.

By examining the association between underrepresentation and stereotype threats, this paper aims to contribute to the literature on minority representation effects on stereotype threat (Steele *et al.*, 2002) extending the research to workplace settings, as suggested by Walton *et al.* (2015). In addition, it seeks to fill the research gap on the relationship between age-based metastereotypes and stereotype threats. Although metastereotypes and stereotype threats are distinct constructs, their integration on a single analytical framework

may provide a better understanding of age dynamics in the workplace, chiefly regarding distinct forms of stereotype threat antecedents.

This paper addresses the following research questions:

RQ1. Does representation trigger distinct forms of stereotype threat?

RQ2. Is the relationship between representation and distinct forms of stereotype threat mediated by negative age-based metastereotypes?

RQ3. Are the relationships between negative age-based metastereotypes and distinct forms of stereotype threat moderated by age diversity beliefs?

In Posthuma and Campion's (2009) literature review on workplace age stereotypes, it became clear that negative age stereotypes about older workers were particularly strong in some industries, such as the financial sector, insurance, retail, and information technology/computing. So far, however, there has been little discussion about age stereotyping contents and processes in other sectors such as manufacturing. Furthermore, there is an extensive body of stereotype threat research that emphasizes race or gender threats (Kalokerinos *et al.*, 2014), overlooking age threats. Given that age, alongside with sex and race comprise the so-called "Big 3" social categories individuals use to make sense of others (Fiske and Neuberg, 1990), greater attention needs to be directed toward age as a relevant social category in the study of stereotype threats in the workplace (Kray and Shirako, 2011). In addition, taking into consideration the widespread negative age stereotypes about older workers (Posthuma and Campion, 2009), and also the findings suggesting that older workers contend with social identity threats in organizational settings (Finkelstein and Farrell, 2007), it is very likely that stereotype threat is a common part of many older workers' experience (Kalokerinos *et al.*, 2014; Kray and Shirako, 2011).

In a context of aging workforces, research on older workers' experience of stereotype threat in manufacturing contexts seems particularly relevant. Additionally, given the highly evaluative nature of most organizational settings, older workers are likely to be vigilant to contextual cues that convey messages about the extent to which their age group is valued by the organization (Kray and Shirako, 2011). Although vigilance does not necessarily prompt stereotype threat (Walton *et al.*, 2015), negative stereotypes about older workers are widespread. Consequently, minority representation might be one of the situational cues that exacerbates stereotype threat in the workplace.

This paper also seeks to further examine different threat targets, namely by looking at the moderation effect of age diversity beliefs on the relationships between negative age-based metastereotypes and two distinct forms of stereotype threat: group-reputation threat and own-reputation threat (Shapiro *et al.*, 2013). By doing so, this paper underlines the links between the age diversity and the stereotype threat literatures, and contributes to a more clear understanding of stereotype threat dimensionality. Figure 1 depicts the research model and the relationships between the constructs.

The paper proceeds with a review of the relevant literature on stereotype threat triggers, and more specifically, minority representation and negative age-based metastereotypes, and on the interactive effects between age diversity beliefs and two distinct forms of stereotype threat.

Theoretical background and research hypotheses

Diversity is best described as the existence and distribution of differences between members of a social unit with respect to a common attribute (Harrison and Klein, 2007). Accordingly, age diversity can be defined as the heterogeneity of a group or organization with respect to its members' age (Williams and O'Reilly, 1998).

According to the separation view of diversity (Harrison and Klein, 2007), attributes like age contribute to categorize the population in classes such as "us" and "them," "old" and "young."

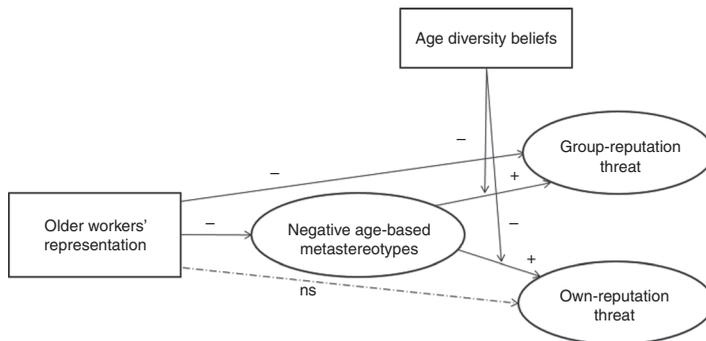


Figure 1.
Research model

In theoretical terms, a separation view of organizational age diversity has been supported by the social identity approach (Tajfel and Turner, 1979; Turner *et al.*, 1987) and by the similarity-attraction paradigm (Byrne, 1971). Demographic characteristics such as age are among the primary perceptual dimensions people use to infer seemingly homogeneous or diverse contexts. Age provides a quick shortcut for people to group themselves and others in meaningful and salient social categories, and references to age cohorts can be found since the early stages of social identity research (Tajfel and Turner, 1986). In this study, the role of age in the workplace builds on this background and is supported by the social identity approach, namely by social identity theory (Tajfel and Turner, 1979), and self-categorization theory (Turner *et al.*, 1987), as well as by the similarity-attraction paradigm (Byrne, 1971).

According to Tajfel (1978, p. 63), social identity is “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership.” But, for different reasons, organizations do not always instill workers with a sense of belonging and satisfaction. For instance, underrepresentation (Kray and Shirako, 2011; Sekaquaptewa and Thompson, 2003; Steele *et al.*, 2002; von Hippel *et al.*, 2011) and negative age-based metastereotypes (Voyles *et al.*, 2014) have been suggested as identity threat antecedents. The similarity-attraction paradigm provides a valuable explanation for the threat prompted by underrepresentation. This paradigm suggests that, in interpersonal contexts, individuals are attracted to, like and seek others who are similar to themselves (Byrne, 1971). Individuals prefer to affiliate with others with whom they share similar thoughts, attitudes, values, feelings, and behaviors because likeness makes it easier to understand and predict the other’s behavior. Moreover, shared beliefs provide, to some extent, the social validation of one’s belief system. Conversely, individuals who think and behave in ways that do not match by any means other individuals’ views are likely to be perceived as threats. As predicted by the sociofunctional approach (Cottrell and Neuberg, 2005), individuals tend to protect themselves from others that threaten the benefits of group living. Effective groups encompass common values, trust, and reciprocity among members. Individuals that do not contribute to those building blocks are likely to be considered threats. For instance, the stereotype content model (Fiske *et al.*, 2002) posits that older people are perceived as a low competence social group. In this way, members of this age group are often incapable of maintaining a reciprocity-based relationship with other group members and, thus, be perceived as threats to the group’s success. As such, perceived dissimilarity might enhance ethnocentric views between social groups that are likely to be further amplified when stereotyped groups are underrepresented in the work context. Perceived stigma against the ingroup prompts different emotional responses among stereotyped group members and, thus, feelings of threat become more salient.

The main effect

Following Johns' (2006) contention that organizational scholars have been relying too heavily on individual characteristics while ignoring the critical role situational factors often play in relevant organizational phenomena, the current study emphasizes the organizational context and the role age composition seems to play in the formation of ageist beliefs.

Previous theoretical models assumed that the organizational distribution of employees may cue stereotype threat (McKay and Avery, 2006). In lab settings, underrepresentation was reported to trigger stereotype threat (Xavier *et al.*, 2014). For instance, women's representation was associated with feelings of stereotype threat (Sekaquaptewa and Thompson, 2003; von Hippel *et al.*, 2011). In other words, the organization's demographic composition seems to signal to the employees, particularly to those who belong to stigmatized or minority groups, that they are undervalued in the organization (Bragger *et al.*, 2014). It is, therefore, likely that such connections exist also between other demographics and stereotype threat. Hence, it is suggested that older workers' age group membership and its salience in the workplace is associated with stereotype threat.

Steele and Aronson's (1995) initial findings suggested that stereotype threat undermined the intellectual performance of individuals belonging to negatively stereotyped groups: given the negative stereotype about African Americans' verbal ability, making their group identity salient was sufficient to impair their academic performance. That being the case, it is likely that older workers' vulnerability to stereotype threat increases in work contexts where their group membership is most salient (Kalokerinos *et al.*, 2014).

Stereotype activation is contingent on several organizational context features. For instance, rigid organizational structures have been associated with higher stereotype threat vulnerability (Kray and Shirako, 2011). Another situational factor pointed out as influencing stereotype relevance is the overall organizational demographic composition. Group heterogeneity in the work environment may raise the likelihood of social identity threats, in particular regarding minority group members (Kalokerinos *et al.*, 2014; Steele *et al.*, 2002). Minority representation at the organizational, unit, departmental, job or team level poses serious challenges to minority organizational members because stigmatized minority individuals are pressured to overachieve in order to refute negative stereotypes about their ingroup (Kray and Shirako, 2011; Sekaquaptewa and Thompson, 2003). Thus, when older workers perceive that their negatively stereotyped age group is an organizational minority, such underrepresentation might evoke social identity threat in the workplace (Murphy *et al.*, 2007; Steele *et al.*, 2002).

While most scholars conceptualize stereotype threat as a unidimensional construct that refers to the concern about representing a stigmatized group (Shapiro *et al.*, 2013), others have argued for further research about stereotype threat multidimensionality (Shapiro and Neuberg, 2007; Xavier *et al.*, 2014). Shapiro and Neuberg (2007) identified six different forms of stereotype threat arising from the combination of two dimensions: the target of the threat (the ingroup, or the self), and the source of the threat (the self, ingroup members, or outgroup members). More specifically, the target of the threat dimension refers to whether the concern about confirming a negative stereotype affects the individuals' own-reputation or the ingroup image. A shortcoming of the unidimensional approach is that it tends to overlook the fact that threat concerns may target the individuals' self-image above and beyond the ingroup image (Shapiro *et al.*, 2013). The usefulness of a multidimensional approach has received recent empirical support as stereotype threat interventions effectiveness was closely related to the underlying target of the threat (Shapiro *et al.*, 2013).

The current study builds on the target of stereotype threat dimension included in the multi-threat framework (Shapiro and Neuberg, 2007) to contend that the representation of older workers is negatively related to group-reputation threat, but not with own-reputation threat. It is assumed that underrepresentation cues stigmatized individuals that their group

membership is a barrier to their development. Concerns about the ingroup reputation and image are likely to be more salient and relevant than concerns about self-worth and own-reputation, therefore offsetting them. Thus, it is hypothesized that:

H1. Older workers' representation is negatively related to group-reputation threat.

Negative age-based metastereotypes as mediators

To further understand the age dynamics in the workplace, research is needed on the beliefs about the stereotypes held by the members of the outgroup as perceived by the ingroup, that is, on age-based metastereotypes. These beliefs are even more important in the context of an aging workforce since the quality of the relationships with colleagues is among the most significant drivers of older workers' job satisfaction (Drabe *et al.*, 2015). Metastereotypes are beliefs regarding stereotypes other social groups hold about one's ingroup and they should be present to initiate the stereotype threat process (Finkelstein *et al.*, 2013, 2015; Voyles *et al.*, 2014). Unlike stereotype threat, metastereotypes do not necessarily involve worry or fear of being stigmatized and thus research would benefit from a separated, yet articulated, framing of these processes. However, few attempts have been made to investigate the relationship between those constructs, especially in field settings (Judd *et al.*, 2005).

A promising framework for age-based metastereotyping activation in work contexts recently presented by Finkelstein *et al.* (2015) includes a set of general research propositions regarding antecedents (e.g. age identification), outcomes (e.g. conflict), and moderators (e.g. core self-evaluations, interventions). The basic tenet of the model is that age-based metastereotypes become activated by individual and contextual factors. Of particular relevance for the current study is the role of the work context in the age-based metastereotype activation process. Consistent with Finkelstein *et al.* (2015), it is suggested that age-based metastereotypes are likely to be more salient in contexts in which age sub-grouping is apparent. Therefore, besides being a stereotype threat trigger at work, minority representation might also impact the age-based metastereotyping process because underrepresentation makes age stereotypes more salient. Moreover, as work contexts are evaluative both on a day-to-day basis and on programmed performance assessments, metastereotype activation is likely to take place more frequently in these types of settings (Finkelstein *et al.*, 2015). Additionally, age becomes an even more meaningful workplace characteristic when workers feel that their age group is a minority in the workplace age demographics. For instance, older workers' underrepresentation may prompt feelings that they are not valued members of the organization, thus activating negative metastereotypes which in turn increase the likelihood of stereotype threats. Moreover, as negative age-based metastereotypes are beliefs that refer to negative age stereotypes hold by other age groups about one's age group, they are likely to trigger concerns that target both age group-reputation and older workers' self-image. Consequently, *H2a* and *H2b* are formulated as follows:

H2a. Negative age-based metastereotypes mediate the relationship between older workers' representation and group-reputation threat.

H2b. Negative age-based metastereotypes mediate the relationship between older workers' representation and own-reputation threat.

The moderating role of age diversity beliefs

Differences in the individual-level factors such as domain identification, ingroup identification, and stigma consciousness were associated with reactions of different nature and magnitude to stereotype threat (Steele *et al.*, 2002), but a comprehensive view of

the age-related stereotype threat boundary conditions in the workplace is still missing. To shed some more light on how stereotype threat is moderated by individual-level factors, the role played by age diversity beliefs in the stereotype threat nomological network is examined in this study.

Diversity beliefs refer to the extent to which diversity in a specific setting is understood as an advantage rather than a risk by the individual (Homan *et al.*, 2010). Empirical findings show that diversity beliefs act as moderators of the individual and organizational impacts of objective age diversity (Ellwart *et al.*, 2013; van Knippenberg *et al.*, 2004). Cognitions about diversity influence both positively and negatively the effects of objective age diversity: on the one hand, they can hamper identity threats posed by social categorization; on the other hand, negative diversity beliefs make age bias more salient reinforcing objective diversity harmful consequences. When team members value diversity, the team performance is likely to be improved. Moreover, if team diversity elicits self-categorization and sub-grouping, social identities become more salient and it is likely that negative effects on team performance will emerge.

Despite mixed accounts in the age diversity literature, Ellwart *et al.* (2013) admit an increasing likelihood of negative effects of age diversity in organizations due to widespread negative stereotypes about older workers. Furthermore, and contrary to other diversity categories such as gender, age diversity is generally beyond the company's control since it is, to a large extent, caused by ongoing demographic changes. An encouraging implication of the acknowledgment of diversity perceptions and beliefs relies on their plasticity and potential for change. From a practical viewpoint, it is probably easier to change age perceptions and beliefs than the organization age structure (Hertel *et al.*, 2013). Herewith, organizational age diversity implies the management of employees' diversity beliefs above and beyond the fit between employment practices (Harrison and Klein, 2007). In sum, the assessment of organizational age diversity beliefs is an important part of the organizational age diversity research agenda. Still, further research is needed on age diversity beliefs and the way age diversity beliefs from members of negatively stereotyped age groups interact with negative age-based metastereotypes in predicting group-reputation and own-reputation threat. It is, therefore, expected that:

H3a. Age diversity beliefs moderate the strength of the relationship between negative age-based metastereotypes and group-reputation threat.

H3b. Age diversity beliefs moderate the strength of the relationship between negative age-based metastereotypes and own-reputation threat.

Method

Participants and procedure

The target population is made of blue-collar older workers of the manufacturing sector in Portugal. This sector may impact older workers' vulnerability to stereotype threat given that physical work demands may put workers' age under the radar in these organizational settings.

The final sample was comprised of 567 participants aged 50-68 years (360 males, 202 females, five unknown) working in 15 manufacturing companies. About 80 percent of the participants worked in large companies (more than 249 workers). The average age of participants was 54.36 years ($SD = 3.35$) and the average tenure in the organization was 24.08 years ($SD = 10.16$). Most respondents were married (82 percent) and for 71 percent of them, basic education was the highest completed education level.

In order to fine tune the research instrument, a pilot study was conducted with 40 participants from five manufacturing companies. Three different sources were included in pilot testing: human resource managers, younger workers (under 36 years old), and

older workers (over 49 years old). The pilot questionnaire items were selected from suitable and reliable scales, and then translated into Portuguese by a translation expert by means of a translation/back-translation procedure (Brislin *et al.*, 1973). The exception was the scale measuring negative age-based metastereotypes, in which the three items included in the pilot questionnaire were selected from previous studies on age stereotypes in the workplace (Posthuma and Campion, 2009), from interviews with three expert scholars, and from consultations with HR managers and workers. The items were developed according to Hinkin's (1998) guidelines.

Measures

Participants were asked to indicate their level of agreement on a five-point Likert scale ranging from 1 (totally disagree) to 5 (totally agree) with statements regarding the following.

Negative age-based metastereotypes. Three items tapped negative age-based metastereotypes held by older workers regarding younger workers beliefs about respondents' ingroup. A sample item is "My younger colleagues feel that I contribute less to the company because of my age."

Group-reputation threat. Participants rated their experience of group-reputation stereotype threat at the workplace through a three-item scale initially designed by Shapiro (2011) and reworded to address specific age issues. One of the items is "I am concerned that my actions might confirm the negative stereotypes about older workers in the minds of others."

Own-reputation threat. This threat was measured using a three-item scale (Shapiro, 2011). A sample item was "I am concerned that my actions could lead my colleagues to judge me based on the stereotypes about older workers."

Age diversity beliefs. Beliefs about age diversity were measured using a single-item measure adapted for age research from van Knippenberg *et al.* (2007): "Creating groups that contain people from different age groups can be a recipe for trouble (reverse scored)."

Older workers' representation. Hinkin (1998) suggested that collecting data from sources other than the respondent is likely to reduce the concerns raised by the common source/common method bias. With that in mind, and whilst accepting the relevance of the measurement of perceived representation, the percentage of older workers in each organization was computed from the employee files provided by HR managers.

Control variables. Chronological age, organizational age diversity (assessed through standard deviation), and organizational tenure were the control variables adopted, bearing in mind previous research showing that organizations' age composition may influence ageist attitudes and behaviors (Kunze *et al.*, 2013).

Results

Analytical procedures

In order to confirm the factorial structure of the scales (negative age-based metastereotypes, group-reputation threat, and own-reputation threat), a confirmatory factor analysis was conducted in AMOS. All of the items were loaded higher than 0.40 on their respective scales. The analysis showed that a three-factor model ($\chi^2(21, n = 470) = 69.87$, RMSEA = 0.07, CFI = 0.97) fits the data better than a one-factor model ($\chi^2(24, n = 470) = 175.10$, RMSEA = 0.12, CFI = 0.91): χ^2 difference (df = 3) = 105.23, $p < 0.001$.

Table I presents the descriptive statistics, bivariate correlations, and Cronbach's α where applicable.

Table I provides further evidence of the convergent validity of the negative age-based metastereotypes scale. In line with the aforesaid theoretical background, the correlations between negative age-metastereotypes and other age-related constructs were statistically significant. All scales have acceptable internal consistency (above 0.70) and all predictor variables were standardized before the analysis.

Table I.
Descriptive
statistics,
 α coefficients,
and correlations

| Variable | <i>M</i> | <i>SD</i> | α | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|----------|-----------|----------|----------|----------|----------|----------|-------|-------|-------|---|
| 1. Older workers' representation | 0.42 | 0.08 | | – | | | | | | | |
| 2. Negative age-based metastereotypes | 2.06 | 1.07 | 0.84 | –0.12** | – | | | | | | |
| 3. Own-reputation threat | 1.96 | 1.12 | 0.79 | –0.11** | 0.54*** | – | | | | | |
| 4. Group-reputation threat | 2.28 | 1.06 | 0.71 | –0.14** | 0.44*** | 0.69*** | – | | | | |
| 5. Age diversity beliefs | 4.02 | 1.27 | | 0.07 | –0.27*** | –0.32*** | –0.33*** | – | | | |
| 6. Age | 54.22 | 3.19 | | –0.15** | 0.08 | 0.02 | 0.06 | 0.01 | – | | |
| 7. Objective organizational age diversity | 9.55 | 0.84 | | –0.20*** | –0.08 | –0.07 | –0.10* | 0.09 | 0.04 | – | |
| 8. Organizational tenure | 23.71 | 10.45 | | –0.09* | 0.04 | –0.01 | 0.01 | –0.06 | 0.12* | –0.02 | – |

Notes: $n > 436$ for all variables. Because objective organizational age diversity was conceptualized as separation, this variable was statistically operationalized through standard deviation. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Hypotheses testing

Hypotheses were tested using the Preacher and Hayes macro PROCESS for SPSS (Hayes, 2013; Preacher and Kelley, 2011). The results from the mediation model indicate that older workers' representation was negatively associated with group-reputation threat ($\beta = -0.13$, $SE = 0.05$, $p < 0.01$), thus supporting *H1*. Consistent with the expectations, the results also show that representation is not related to own-reputation threat ($\beta = -0.04$, $SE = 0.04$, $p = 0.34$).

There is a significant indirect effect of representation on group-reputation threat through negative age-based metastereotypes, $\beta = -0.05$, BCa 99 percent CI (-0.11 , -0.01), $\kappa^2 = 0.06$, BCa 99 percent CI (0.01, 0.11) and on own-reputation threat through negative age-based metastereotypes, $\beta = -0.07$, BCa 99 percent CI (-0.14 , -0.01), $\kappa^2 = 0.08$, BCa 99 percent CI (0.01, 0.15). These results represent a small to medium indirect effect size (Preacher and Kelley, 2011) and support *H2a* and *H2b*.

The results concerning the moderating effect of age diversity beliefs only support *H3b*. As shown in Table II, age diversity beliefs moderate the relationship between negative age-based metastereotypes and own-reputation threat, but no moderator effect was found on the relationship between negative age-based metastereotypes and group-reputation threat.

Contrary to expectations, the interaction of negative age-based metastereotypes with age diversity beliefs does not predict group-reputation threat ($\beta = -0.04$, $SE = 0.04$, $p = 0.31$). Yet, age diversity beliefs interact with negative age-based metastereotypes to moderate own-reputation threat in a significant way, $\beta = -0.09$, 99 percent CI (-0.17 , -0.01), $t = -2.70$, $p < 0.01$, indicating that the relationship between negative age-based metastereotypes and own-reputation threat is weakened by age diversity beliefs. A graphical depiction of this interaction effect is shown in Figure 2. When age diversity beliefs are high, the effect of

Table II.
Moderated regression
analyses predicting
group-reputation
threat and own-
reputation threat

| Variable | Second stage dependent variable = Group-reputation threat | | | Second stage dependent variable = Own-reputation threat | | |
|---|---|-------------|--------------|---|-------------|----------------|
| | β | <i>SE</i> | <i>t</i> | β | <i>SE</i> | <i>t</i> |
| Negative age-based metastereotypes | 0.35 | 0.05 | 6.95*** | 0.44 | 0.05 | 9.73*** |
| Age diversity beliefs | –0.15 | 0.04 | –3.42*** | –0.12 | 0.04 | –3.15** |
| Negative age-based metastereotypes \times Age diversity beliefs | <i>–0.04</i> | <i>0.04</i> | <i>–1.03</i> | <i>–0.09</i> | <i>0.03</i> | <i>–2.70**</i> |
| <i>F</i> | | | 18.37*** | | | 25.67*** |
| <i>R</i> ² | | | 0.23 | | | 0.32 |

Notes: $n > 385$ for all variables. Values in italics are relevant to test hypotheses. ** $p < 0.01$; *** $p < 0.001$

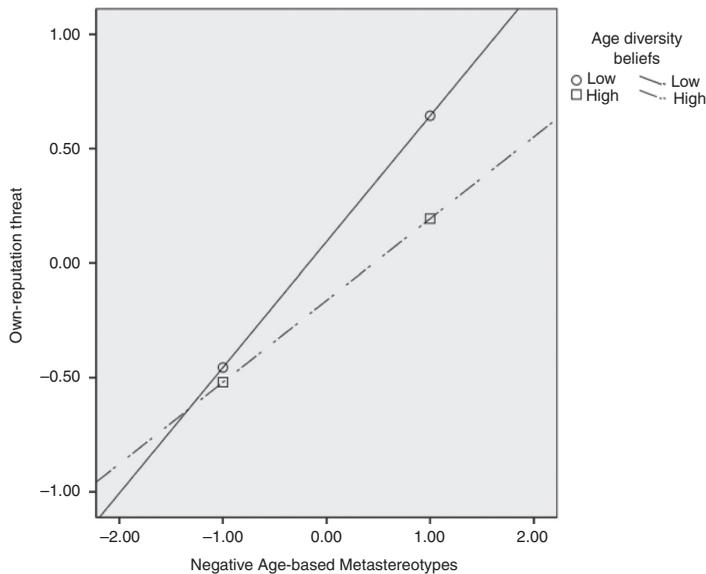


Figure 2. Interaction effect of negative age-based metastereotypes and age diversity beliefs on own-reputation threat. High and low levels of age diversity beliefs represent one standard deviation above and below the mean, respectively

negative age-based metastereotypes on own-reputation threat is weakened, suggesting that nurturing older workers' age diversity beliefs might be a promising way to deter age threats in the workplace.

Discussion

This study aims to extend the scholarship on the minority representation effects on stereotype threat, in particular regarding older workers' age threats in the manufacturing industry. The findings indicate that representation is indeed a potential source of age-based stereotype threat, but only when the threat targets the ingroup reputation (group-reputation threat). Representation does not increase older workers' concerns about self-worth and own-reputation. Possible explanations for this finding may be that older workers do not believe that their performance on the job is publicly linked to their personal skills; or, that older workers may believe that co-workers are not able to identify them as older workers. In other words, whenever job behaviors cannot be linked to older workers personally, older workers' self-esteem and own-reputation are not under threat. Another possible explanation for this finding is that stigmatized workers may not believe that their co-workers think the negative stereotypes of themselves are true. This belief reduces vulnerability to the own-reputation threat by protecting one's ego and self-esteem from the knowledge of threatening forces from his external world, and by reducing the anxieties created by such threats (Katz, 1960). However, while ego-defensive mechanisms help workers to protect their self-image, they do not eliminate stereotype threat. To cope with own-reputation threats, it would perhaps be best for older workers to engage in ego-expressive attitudes (Katz, 1960) like self-affirmation (Shapiro *et al.*, 2013), to the extent that these attitudes assert one's identity. It can thus be suggested that representation is a situational cue that exacerbates only specific forms of stereotype threat in the workplace. Hence, this study seems to confirm early calls by Shapiro and Neberg (2007) for a multi-threat framework, as representation seems not to have the same triggering effect on the different types of threat. It appears that the underrepresentation only increases older workers' vulnerability to the group-reputation threat. Given that previous research demonstrates differential risk for stereotype threat types between and within different negatively stereotyped groups

(Shapiro, 2011), and that age emerges as a stigmatizing characteristic, age is not a dimension of stigma up to a certain point in one's life cycle (Shapiro, 2011), it is likely that the age-based stereotype threat experience has distinctive characteristics. To the extent that negative age stereotypes about older workers are particularly strong in industries such as technology/computing or the financial sector (Posthuma and Campion, 2009), it is likely that underrepresentation might cue more sharply age stereotypes and publicly link them to the stigmatized group in those industries. Thus, older workers are likely to become more vulnerable to group-reputation threats. Moreover, ingroup identification levels may play a role in this regard, with highly identified older workers being more vulnerable to group-reputation threats.

In addition, this study adds representation as a relevant contextual factor contributing to the age-based metastereotype activation model advanced by Finkelstein *et al.* (2015). A conceivable explanation for this might be that the underrepresentation of older workers cues age differences in the workplace making those differences more salient. It is expected, therefore, that age-based metastereotype activation prompts attitudinal and behavioral consequences. The results did show that negative age-based metastereotypes are the antecedents of the two distinct forms of stereotype threat under examination: own-reputation threat and group-reputation threat. These findings also confirm Voyles *et al.*'s (2014) suggestion that age-based metastereotypes are likely to trigger stereotype threat. Moreover, negative age-based metastereotypes were found to have an indirect effect on the relationship between representation and group-reputation threat and own-reputation threat. Taken together, these findings support the cross-fertilization between the age-based metastereotype activation model (Finkelstein *et al.*, 2015) and the stereotype threat nomological framework. It is admitted that a more comprehensive view of workplace age dynamics might be attained through the articulation and integration of both constructs on a single analytical framework.

Another important finding was the mixed results of the moderator analyses. Age diversity beliefs moderated the relationship between negative age-based metastereotypes and stereotype threats, but only in the case of own-reputation threat. Surprisingly, age diversity beliefs did not yield a significant effect on group-reputation threat. This result may be explained by the fact that negative age-based metastereotypes cancel out the upside effects of diversity beliefs with respect to group-reputation. As negative metastereotypes constrain the desire for a positive image of the ingroup, age diversity beliefs are likely to be influenced by those metastereotypes and herewith losing its potential to hamper age threats. On the other hand, understanding age diversity as an advantage and not a risk might protect one's self-image from the harmful effects of negative age-based metastereotypes because they refer, above all, to one's ingroup reputation. Age diversity beliefs are an individual difference that seems to limit the threat targeted to the self. As a result, the worry and concern elicited by negative age-based metastereotypes are alleviated. These findings are in line with one of the tenets of Shapiro and Neuberg's (2007) multi-threat model whereby different forms of threat are likely to be moderated by distinct boundary conditions. In addition, the current study extended the research on the difference between group-reputation and own-reputation threats to field settings, supporting the view that these two threats are distinct constructs as reported in experimental work conducted by Shapiro *et al.* (2013).

In sum, support was found for the usefulness of a stereotype multi-threat framework as age diversity beliefs yielded different effects on each of the two different threats under analysis in this study. Then, group-reputation threat and own-reputation threat can be experienced independently of one another since representation predicted only the former thus confirming that threats do not always share common eliciting conditions. In other words, age-based metastereotypes are important stereotype threat drivers that should systematically be involved in identity threat research whenever team work is required.

Implications

This research may foster the scholars' interest in a multidimensional perspective of age-based stereotype threat in organizations. One of the issues that emerges from the findings is that stereotype threat measures must specify the target and, by extension, the source of the threat (Xavier *et al.*, 2014). Only by doing so will researchers be able to get a better understanding of the conditions that engage, moderate, and mediate stereotype threat. As discussed above, older workers' representation triggered only one of the threats addressed. By distinguishing the threats, stereotype management interventions can be tailored to each specific threat, which may facilitate and improve their effectiveness, and ultimately identify optimal age diversity management activities. For instance, the presentation of ingroup role models to older workers is suggested in order to remedy group-reputation threat elicited by representation and negative age-based metastereotypes, whereas self-affirmation interventions might be combined with initiatives that foster age diversity beliefs to alleviate own-reputation threat (Shapiro *et al.*, 2013). Additionally, because changing an organization's age composition by increasing the number of workers from underrepresented groups is hard to achieve, other type of stereotype management activities should be designed and implemented. The findings recommend the reframing of age-related cognitions and beliefs contents through age diversity training programs as they may assure that the benefits of diversity are properly and fully realized by organizational members, particularly when the self is under threat. Since every so often a substantial part of the workforce is left apart from these programs due to their managerial focus, diversity programs do not yield the results they were designed for. Addressing directly age stereotypes and the social threat they represent to stereotype targets, as well as building awareness about age norms (Hertel *et al.*, 2013) removes the focus from prejudiced and stigmatized employees and turns it to everyone's concern. By doing so, these interventions can prevent contextual cues from hampering the full potential of stigmatized workers.

Limitations and future research

This study has some limitations. Data were mainly collected through self-reports and from the same employee data set, thus raising the risk that common method variance and same source bias were driving the reported findings, and possibly inflating them (Podsakoff *et al.*, 2012). Nevertheless, Siemsen *et al.* (2010) suggested that interactions are more difficult to detect when common method variance is an issue. Since moderation effects were found in the current study, it is admitted that common method bias does not play a relevant role in the analysis. The results also need to be interpreted with caution as they cannot be extrapolated to older workers in general. The fact that most participants worked in large companies mean that these findings may not be transferable to workers of small and medium-sized companies. More specifically, as organizational size decreases it is likely that older workers' representation becomes a more salient contextual cue. Extending the research to small and medium-sized companies would shed additional light on this issue.

The results of this research seem to support the idea that age-based metastereotypes play a key role in the intergenerational dynamics in the workplace. As this study only focused on older workers' metastereotypes about younger workers, further work is required to establish whether older workers' metastereotypes about middle-aged workers have similar effects in age diverse workgroups. Additional research should also be done on other conditions that determine specific threats. For instance, group identification has been proposed as an eliciting condition of group-reputation threat but not of own-reputation threat (Shapiro and Neuberger, 2007). The need was also detected for further studies addressing the antecedents and boundary conditions of distinct threat sources in a more systematic way.

Conclusion

This paper contributes to the literature by showing the importance of negative age-based metastereotypes in workplace age dynamics. It also provides further support for a multi-threat approach to the experience of age-based stereotype threats in the workplace, to the extent that the representation of older workers is negatively related to group-reputation threat, but not to own-reputation threat. There is, therefore, a definite need for managers to take a closer look at the process of social identity management in the workplace in order to improve diversity interventions' effectiveness.

References

- Bragger, J., Torres, N. and Kutcher, E. (2014), "Against the deselection of the stereotype threat agenda", *Industrial and Organizational Psychology*, Vol. 7 No. 3, pp. 433-438.
- Brislin, R., Lonner, W. and Thorndike, R. (1973), *Cross-Cultural Research Methods*, Wiley, New York, NY.
- Byrne, D. (1971), *The Attraction Paradigm*, Academic Press, New York, NY.
- Cottrell, C. and Neuberg, S. (2005), "Different emotional reactions to different groups: a sociofunctional threat-based approach to 'prejudice'", *Journal of Personality and Social Psychology*, Vol. 88 No. 5, pp. 770-789.
- Drabe, D., Hauff, S. and Richter, N. (2015), "Job satisfaction in aging workforces: an analysis of the USA, Japan and Germany", *The International Journal of Human Resource Management*, Vol. 26 No. 6, pp. 783-805.
- Ellwart, T., Bündgens, S. and Rack, O. (2013), "Managing knowledge exchange and identification in age diverse teams", *Journal of Managerial Psychology*, Vol. 28 Nos 7/8, pp. 950-972.
- Eurofound (2013), *Role of Governments and Social Partners in Keeping Older Workers in the Labour Market*, Eurofound, Dublin.
- European Commission (2014), *The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies*, Directorate-General for Economic and Financial Affairs, Brussels.
- Finkelstein, L. and Farrell, S. (2007), "An expanded view of age bias in the workplace", in Shultz, K. and Adams, G. (Eds), *Ageing and Work in the 21st Century*, Lawrence Erlbaum Associates, Inc., Mahwah, NJ, pp. 73-108.
- Finkelstein, L., King, E. and Voyles, E. (2015), "Age metastereotyping and cross-age workplace interactions: a meta view of age stereotypes at work", *Work, Aging and Retirement*, Vol. 1 No. 1, pp. 26-40.
- Finkelstein, L., Ryan, K. and King, E. (2013), "What do the young (old) people think of me? Content and accuracy of age-based metastereotypes", *European Journal of Work and Organizational Psychology*, Vol. 22 No. 6, pp. 633-657.
- Fiske, S. and Neuberg, S. (1990), "A continuum of impression formation, from category-based to individuating processes: influences of information and motivation on attention and interpretation", *Advances in Experimental Social Psychology*, Vol. 23 No. C, pp. 1-74.
- Fiske, S., Cuddy, A., Glick, R. and Xu, J. (2002), "A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition", *Journal of Personality and Social Psychology*, Vol. 82 No. 6, pp. 878-902.
- Guillaume, Y., Dawson, J., Priola, V., Sacramento, C., Woods, S., Higson, H., Budhwar, P. and West, M. (2014), "Managing diversity in organizations: an integrative model and agenda for future research", *European Journal of Work and Organizational Psychology*, Vol. 23 No. 5, pp. 783-802.
- Harrison, D. and Klein, K. (2007), "What's the difference? Diversity constructs as separation, variety, or disparity in organizations", *Academy of Management Review*, Vol. 32 No. 4, pp. 1199-1228.
- Hayes, A. (2013), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, Guilford Press, New York, NY.

- Hertel, G., van der Heijden, B., De Lange, A. and Deller, J. (2013), "Facilitating age diversity in organizations – part II: managing perceptions and interactions", *Journal of Managerial Psychology*, Vol. 28 Nos 7/8, pp. 857-886.
- Hinkin, T. (1998), "A brief tutorial on the development of measures for use in survey questionnaires", *Organizational Research Methods*, Vol. 1 No. 1, pp. 104-121.
- Homan, A., Greer, L., Jehn, K. and Koning, L. (2010), "Believing shapes seeing: the impact of diversity beliefs on the construal of group composition", *Group Processes & Intergroup Relations*, Vol. 13 No. 4, pp. 477-493.
- Johns, G. (2006), "The essential impact of context on organizational behavior", *Academy of Management Review*, Vol. 31 No. 2, pp. 386-408.
- Judd, C., Park, B., Yzerbyt, V., Gordijn, E. and Muller, D. (2005), "Attributions of intergroup bias and outgroup homogeneity to ingroup and outgroup others", *European Journal of Social Psychology*, Vol. 35 No. 6, pp. 677-704.
- Kalokerinos, E., von Hippel, C. and Zacher, H. (2014), "Is stereotype threat a useful construct for organizational psychology research and practice?", *Industrial and Organizational Psychology*, Vol. 7 No. 3, pp. 381-402.
- Katz, D. (1960), "The functional approach to the study of attitudes", *Public Opinion Quarterly*, Vol. 24 No. 2, pp. 163-204.
- Kray, L. and Shirako, A. (2011), "Stereotype threat in organizations: an examination of its scope, triggers, and possible interventions", in Inzlicht, M. and Schmader, T. (Eds), *Stereotype Threat: Theory, Process, and Application*, Oxford University Press, New York, NY, pp. 173-187.
- Kunze, F., Boehm, S. and Bruch, H. (2013), "Age, resistance to change and job performance", *Journal of Managerial Psychology*, Vol. 28 Nos 7/8, pp. 741-760.
- McKay, P. and Avery, D. (2006), "What has race got to do with it? Unraveling the role of racioethnicity in job seekers' reactions to site visits", *Personnel Psychology*, Vol. 59 No. 2, pp. 395-429.
- Murphy, M., Steele, C. and Gross, J. (2007), "Signaling threat: how situational cues affect women in math, science, and engineering settings", *Psychological Science*, Vol. 18 No. 10, pp. 879-885.
- Ng, T. and Feldman, D. (2012), "Evaluating six common stereotypes about older workers with meta-analytical data", *Personnel Psychology*, Vol. 65 No. 4, pp. 821-858.
- Podsakoff, P., MacKenzie, S. and Podsakoff, N. (2012), "Sources of method bias in social science research and recommendations on how to control it", *Annual Review of Psychology*, Vol. 63, pp. 539-569.
- Posthuma, R. and Campion, M. (2009), "Age stereotypes in the workplace: common stereotypes, moderators, and future research directions", *Journal of Management*, Vol. 35 No. 1, pp. 158-188.
- Preacher, K. and Kelley, K. (2011), "Effect size measures for mediation models: quantitative strategies for communicating indirect effects", *Psychological Methods*, Vol. 16 No. 2, pp. 93-115.
- Schröder, H., Muller-Camen, M. and Flynn, M. (2014), "The management of an ageing workforce: organisational policies in Germany and Britain", *Human Resource Management Journal*, Vol. 24 No. 4, pp. 394-409.
- Sekaquaptewa, D. and Thompson, M. (2003), "Solo status, stereotype threat, and performance expectancies: their effects on women's performance", *Journal of Experimental Social Psychology*, Vol. 39 No. 1, pp. 68-74.
- Shapiro, J. (2011), "Different groups, different threats: a multi-threat approach to the experience of stereotype threats", *Personality and Social Psychology Bulletin*, Vol. 37 No. 4, pp. 464-480.
- Shapiro, J. and Neuberg, S. (2007), "From stereotype threat to stereotype threats: implications of a multi-threat framework for causes, moderators, mediators, consequences, and interventions", *Personality and Social Psychology Review*, Vol. 11 No. 2, pp. 107-130.
- Shapiro, J., Williams, A. and Hambarchyan, M. (2013), "Are all interventions created equal? A multi-threat approach to tailoring stereotype threat interventions", *Journal of Personality and Social Psychology*, Vol. 104 No. 2, pp. 277-288.

- Siemsen, E., Roth, A. and Oliveira, P. (2010), "Common method bias in regression models with linear, quadratic, and interaction effects", *Organizational Research Methods*, Vol. 13 No. 3, pp. 456-476.
- Steele, C. and Aronson, J. (1995), "Stereotype threat and the intellectual test performance of African Americans", *Journal of Personality and Social Psychology*, Vol. 69 No. 5, pp. 797-811.
- Steele, C., Spencer, S. and Aronson, J. (2002), "Contending with group image: the psychology of stereotype and social identity threat", in Zanna, M. (Ed.), *Advances in Experimental Social Psychology*, Vol. 34, Academic Press, San Diego, CA, pp. 379-440.
- Tajfel, H. (1978), *Differentiation between Social Groups: Studies in the Social Psychology of Intergroup Relations*, Academic Press, London.
- Tajfel, H. and Turner, J. (1979), "An integrative theory of intergroup conflict", in Austin, W. and Worchel, S. (Eds), *The Social Psychology of Intergroup Relations*, Brooks/Cole, Monterey, CA, pp. 33-47.
- Tajfel, H. and Turner, J. (1986), "The social identity theory of intergroup behavior", in Worchel, S. and Austin, W. (Eds), *Psychology of Intergroup Relations*, Nelson-Hall, Chicago, IL, pp. 7-24.
- Turner, J., Hogg, M., Oakes, P., Reicher, S. and Wetherell, M. (1987), *Rediscovering the Social Group: A Self-Categorization Theory*, Blackwell, Oxford.
- van Knippenberg, D., De Dreu, C. and Homan, A. (2004), "Work group diversity and group performance: an integrative model and research agenda", *Journal of Applied Psychology*, Vol. 89 No. 6, pp. 1008-1022.
- van Knippenberg, D., Haslam, S. and Platow, M. (2007), "Unity through diversity: value-in-diversity beliefs as moderator of the relationship between work group diversity and group identification", *Group Dynamics: Theory, Research, and Practice*, Vol. 11 No. 3, pp. 207-222.
- von Hippel, C., Issa, M., Ma, R. and Stokes, A. (2011), "Stereotype threat: antecedents and consequences for working women", *European Journal of Social Psychology*, Vol. 41 No. 2, pp. 151-161.
- Voyles, E., Finkelstein, L. and King, E. (2014), "A tale of two theories: stereotype threat and metastereotypes", *Industrial and Organizational Psychology*, Vol. 7 No. 3, pp. 419-422.
- Walton, G., Murphy, M. and Ryan, A. (2015), "Stereotype threat in organizations: implications for equity and performance", *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 2 No. 1, pp. 523-550.
- Williams, K. and O'Reilly, C. (1998), "The complexity of diversity: a review of forty years of research", in Staw, B. and Sutton, R. (Eds), *Research in Organizational Behavior*, Vol. 21, JAI Press, Greenwich, CT, pp. 77-140.
- Xavier, L., Fritzsche, B., Sanz, E. and Smith, N. (2014), "Stereotype threat: how does it measure up?", *Industrial and Organizational Psychology*, Vol. 7 No. 3, pp. 438-447.

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