RESEARCH ARTICLE

Meta-identification: Perceptions of others’ group identification shape group life

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Abstract
In the present research, we introduce and develop the concept of meta-identification – perceptions of others’ identification with a group – and examine its capacity to shape group life. Across two cross-sectional studies and three experiments (N_total = 3992), we investigate the relationship between participants’ meta-identification in an intragroup context and their group meaningfulness, collective self-efficacy, organisational citizenship behaviour and (perceived and behavioural) performance. Results indicate that perceiving other group members to be highly identified with a group promotes perceptions of group meaningfulness and collective self-efficacy, promotes organisational citizenship behaviour and enhances perceived, and in some contexts actual, group performance. Furthermore, results show that individuals’ meta-identification makes a unique contribution to outcomes above and beyond their social identification. We discuss implications for social identity theorising and the role of meta-identification in supporting meaningful and functional group life.

KEYWORDS
group identification, group membership, group processes, meta-cognition, meta-identification, social identity

INTRODUCTION

More than three decades of research has demonstrated the fundamental role of individuals’ connection to the group (i.e. their group or social identification) in guiding a range of group-related cognitions, emotions and behaviours. Yet while social identification is reliably associated with important group outcomes, there is also a substantial amount of unexplained variance in these outcomes. This suggests that other potentially significant factors may be present but that these have eluded our attention thus far. In the present program of research, we suggest that one such factor is meta-identification reflecting perceived others’ identification with one’s group. Building on a growing body of social identity theorising and hundreds of studies on the effects of a person’s (own) group or social identification (Tajfel & Turner, 1979; Turner et al., 1987; summarised in several reviews and meta-analyses, see also Ellemers, 2012; Lee et al., 2015; Ng, 2015; Riketta, 2005; Steffens et al., 2017; van Zomeren et al., 2008), in the present paper we explore the contribution of meta-identification to group life.

In developing the concept of meta-identification, we draw on the literature on meta-perceptions which shows that people’s psychology is influenced in powerful ways by their perceptions of what other
people are doing, thinking and feeling. Extending this observation, we explore the simple but potentially powerful idea that, all else being equal, people’s experiences and behaviours in a group should be affected by the extent to which they perceive other people to identify with it. In line with this suggestion, across five (cross-sectional and experimental) studies we examine how meta-identification in an intragroup context shapes group life by affecting key group-based experiences and behaviours. These include the perceived meaningfulness of the group as well as collective self-efficacy, organisational citizenship behaviour and perceived and actual group performance.

The present research advances the social identity and group psychology literature in significant ways by showing that group psychology is influenced not only by an individual’s own relationship with a group but also by other people’s relationship with that group. An emerging body of research demonstrates that our ability to explain crucial group experiences and outcomes is significantly enhanced by embracing broader concepts of social identification that encompass collective forms of identification (e.g. average group levels of identification in a group; Jans et al. 2015; Junker et al., 2022; or shared identification; ‘There is a sense of we-ness in the group’: Hopkins et al., 2016; Koudenberg et al., 2017; for reviews see Häusser et al., 2020; van Dick et al. 2018). The concept of meta-identification provides a conceptual advance on previous work in so far it allows us to disentangle individuals’ own social identification from that of others and to isolate the impact that perceptions of others’ relationship with a collective have on group dynamics. By exploring this impact, the present research thus provides a more comprehensive explanation of individuals’ navigation of group life as function of their own identification as well as of perceived others’ identification with a group. Indeed, the present results show that key group experiences and outcomes are driven by meta-identification even when taking into consideration people’s own identification.

2 | IDENTIFICATION AS A BASIS FOR GROUP ATTITUDES AND BEHAVIOUR

The human species would have been far less successful had it not been capable of organising its activity in groups (Henrich et al., 2003). Regardless of whether they are family and kinship groups, task or work groups, organisations or communities of varying sizes, groups are thus central to innovation, advanced forms of culture (Dean et al., 2014; Mesoudi, 2016; Richerson, 2004) and other vital human achievements. Indeed, these things would be impossible without groups and the cooperation (De Dreu et al., 2014; Tyler & Blader, 2000), coordination (Boos et al., 2011; Weick & Roberts, 1993), organisation (Akerlof & Kranton, 2005; Alvesson, 2012; Haslam, 2004) and social learning for which groups provide a platform. Mindful of this point, an extensive literature has sought to explain what makes groups and communities function effectively and how, when and why they affect members’ cognitions, emotions and behaviours. One widely established perspective in this literature is the social identity approach (Ellemers et al., 2002; Haslam, 2014; Reicher et al., 2010), which encompasses social identity theory (Tajfel & Turner, 1979) and self-categorisation theory (Turner et al., 1987). This approach centres on the proposition that humans can see and understand themselves and others not only as unique individuals (as ‘I’; in terms of personal identity) but also as members of a social group (as ‘we’; in terms of social identity).

According to the social identity approach, when people identify with a group – so that the group becomes an internalised part of the self – this brings about a qualitative shift in individuals’ cognitions and behaviours in ways that lead these to be more oriented towards the collective (Turner, 1982). Research shows that group identification gives rise to important psychological resources such as a sense of belonging, control and agency, social support and solidarity, and meaning and purpose (e.g. Crabtree et al., 2010; Drury et al., 2009; Fritsche et al., 2013; Greenaway et al., 2015, 2016a; Haslam et al., 2005; Kyprianides et al., 2019; Levine et al., 2005; van Dick & Wagner, 2002; van Zomeren et al., 2012). Through these resources, group identification has been found to enhance people’s ability to cope with life and work challenges such as loneliness (Haslam et al., 2019; Wakefield et al., 2020), discrimination (Branscombe et al., 1999; Jetten et al., 2001), trauma (Muldoon & Downes, 2007; Muldoon et al., 2017) and stigma (Kreiner et al., 2006; Whitson et al., 2017) and to support mental and physical health and well-being (Cruwys et al., 2014; Jetten et al., 2012; Haslam et al., 2018; Haslam & Reicher, 2006; Häusser et al., 2012; Sani et al., 2012; Steffens et al., 2017; Wakefield et al., 2019).

Group identification also promotes greater cooperation and coordination in social, organisational and applied domains (see Ashforth et al., 2008; Ellemers, 2012; Haslam et al., 2003; Hogg & Terry, 2000; Lee et al., 2015). When people identify with a group, team or organisation, they are more likely to remain part of the group (De Moura et al., 2009; Mael & Ashforth, 1995), to be motivated to work hard for the group (Haslam et al., 2000; van Knippenberg, 2000), to go the extra mile by helping other group members (Levine et al., 2005; van Dick et al., 2006) and to engage in behaviour that advances the group’s shared interests (Giessner et al., 2013; van Zomeren et al., 2008).

To sum up, decades of research have established that group identification provides the psychological underpinning for group life and collective behaviour (Turner, 1982; Turner et al., 1987; for reviews, see Abrams & Hogg, 1990; Ashforth et al., 2008; Ellemers, 2012; Haslam, 2014; Turner & Reynolds, 2001). Accordingly, the measures that this body of research has typically employed refer to an individual’s identification with a social group (e.g. as captured by responses to items such as ‘I identify with this group’; ‘I am glad to be a member of this group’; e.g. Bergamo & Bagozzi, 2000; Brown et al., 1986; Cameron, 2004; Doosje et al., 1995; Ellemers et al., 1999; Leach et al., 2008; Mael & Ashforth, 1992; Postmes et al., 2013). But groups also comprise other individuals and so as a member of a group one is also likely to have a sense of the extent to which other people may identify with a group.
META-IDENTIFICATION

3 | META-IDENTIFICATION AS A BASIS FOR GROUP ATTITUDES AND BEHAVIOUR

We refer to the process of perceiving others to identify with one’s group as meta-identification. The idea (and term) of meta-identification is consistent with various literature which show that behaviour is shaped in powerful ways by our beliefs about what others think or feel. This includes work on theory of mind (Leslie, 1987; Wellman, 1992), transactive memory (beliefs about other people’s knowledge; Wegener, 1987), meta-dehumanisation (beliefs about other people’s dehumanisation of one’s group; Kteily et al., 2016) and meta-stereotypes (beliefs about other people’s stereotypes about one’s group; Vorauer et al., 1998). While meta-identification might relate to perceptions of ingroup or outgroup members with one’s group, in the present paper we focus on meta-identification in an intragroup context and so use meta-identification to refer to perceptions of other group members’ identification with one’s group.

The propositions examined in the present paper are founded on the argument that meta-identification within an ingroup creates a pathway to psychological group membership (i.e. a person’s understanding of what it means to be part of a group). The core idea is that when an individual perceives other members of their group to identify strongly (rather than weakly) with the group, this should unlock various resources associated with group membership, including (a) a sense of commonality and solidarity (because others are seen to share and pursue a common purpose; Drury et al., 2009) and (b) trust and mutual understanding by virtue of shared group affiliation (because others are believed to be willing to engage constructively with oneself; Platow et al., 1990). This accords with research by Platow et al. (2012) which showed that knowledge of their shared group membership was a basis for trust between strangers. Building on this, we contend that beyond common knowledge of categorical group membership (an understanding that we are in the same group), the perceived strength of others’ identification with the group (an understanding that the group is important to other members) should further enhance, and unlock, group membership-based resources.

The idea that meta-identification of other group members might play a unique role in group functioning builds and expands on research on group identification in shared group contexts. For example, in a study of university student project groups, Jans et al. (2015) found that mean levels of identification in a group accounted for unique variance in the subsequent development of members’ identification with their group – over and above a given member’s initial identification. Exhaustion in work teams has also been linked to both employees’ own levels of identification and the mean levels of identification within their team (Junker et al., 2022). In particular, incongruence between levels of people’s own and group-level identification seemed to weaken the otherwise beneficial impact of average group-level identification. Likewise, the positive relationship between social identification and indicators of health is meta-analytically stronger when identification is shared among group members (Steffens et al., 2017).

This body of work suggests that people’s experiences are impacted in significant ways by others’ group identification. However, the insights provided by this body of research are limited in that (a) average group-level identification is necessarily confounded partly with people’s own group identification, (b) it provides little insight into whether people form perceptions of others’ group identification and (c) it fails to explore whether group identification and meta-identification make independent contributions to group outcomes. These gaps in our understanding are important because the literature shows not only that people’s perception matters (e.g. Ajzen, 1991; Bandura, 1997) but also that in many contexts people perceive their own behaviour to be guided by internal states that differ from those that inform the behaviour of other group members (Miller & McFarland, 1987; Prentice & Miller, 1993, 1996). This, in turn, suggests that individuals will engage with a group differently if they perceive others to identify more or less strongly with the group, regardless of how much those members actually identify with the group.

A second program of relevant research has focused on examining how perceptions of shared identity – that is, a global perception of a sense of “we-ness” in a group – is associated with group experiences and outcomes (e.g. Drury et al., 2019; 2020; Häussler et al., 2020; Hopkins et al., 2016; Koudenberg et al., 2017; Neville & Reicher, 2011; van Dick et al., 2018). For example, Khan et al. (2015) examined groups of pilgrims in North India and found that the extent to which people felt that ‘there was a sense of “we-ness”’ among people participating in their pilgrimage was positively associated with health and well-being. Similarly, studies have shown that increases in shared identity, over and above people’s (own) identification with the group, shape the experience of stress in organisations (van Dick et al., 2018) and predict greater comfort in social interactions with crowds (Neville et al., 2022). Research in the context of COVID-19 also showed that perceived shared identification with one’s nation enhanced adherence to recommendations for health-protective behaviour (Frenzel et al., 2022). This research highlights (a) that there is more to groups than people’s group identification and (b) that people’s perception of shared identity matters. Yet, shared identification captures simultaneously the importance of a group identity to the individual perceiver as well as to other members (as captured in items such as ‘We identify with [the group]’ or ‘I feel there is a sense of ‘shared identity’ with other people [in the group]’). In sum, this body of research suggests that broader issues related to others’ group identification might influence group-based outcomes. However, it does not allow us to disentangle the distinct contribution to group life that derives from a person’s own and other members’ (perceived) group identification and so we cannot rule out the possibility that the observed effects are driven by individual-level processes associated only with a person’s own identification.

4 | THE PRESENT RESEARCH

In the present work, we develop the concept of meta-identification and examine its capacity to shape group life. Meta-identification
captures the notion that people may vary in their perceptions of other group members' identification with their group in a way that is likely to impact on group cognitions and behaviour. Put simply, people are likely to differ in their meta-identification: one individual may perceive other group members to identify strongly with their group, while another may perceive other group members to be less strongly identified. In capturing the perceived identification of other group members with the group, we anticipate that meta-identification is a separate construct, distinct from people's group identification, that has important consequences for group behaviour and cognition. The conceptual model we examine is presented schematically in Figure 1.

More specifically, we argue that meta-identification should exert an influence on group life by unlocking important group resources that shape what it means to be a group member and the way in which the group and its members relate to each other and to shared activities. In line with this logic, we assess the associations between meta-identification and key group experiences and outcomes. Specifically, building on the proposition that psychological group membership becomes potent when people believe that they share membership in it (Brown, 1988; Turner, 1982), high meta-identification should provide ingroup members with a strengthened sense of purpose that is likely to amplify the experience of a group as (a) meaningful and (b) capable of achieving shared goals. By way of example, if Sophie feels that other team members do not identify with the team, she is likely to see the group's activities as less vibrant and have less confidence that the group can achieve collective goals than if she felt her fellow team members were all high-identifiers. Furthermore, because a shared sense of ‘us’ is a basis for helping and citizenship (Lee et al., 2015; Levine et al., 2005), and individuals’ sense of ‘us’ should be strengthened by meta-identification, they should also be more motivated (c) to engage in organisational (group) citizenship behaviour by going the ‘extra-mile’ to help other members (Podsakoff et al., 2009) and (d) to exert greater effort on shared group tasks to the extent that they believe that the group is an important part of how others see themselves.

In the present program of research involving a set of field and experimental studies, we therefore test the hypothesis that meta-identification is a basis for key group outcomes including (a) group meaningfulness and (b) collective self-efficacy, as well as (c) organisational citizenship behaviour towards members of their group and (d) performance. To facilitate an integrative understanding of the results, the sequence of the studies is informed by the capacity of the results to provide evidence of causality (from correlational to experimental). Across the studies, we examine social identification and meta-identification in relation to a range of groups (e.g. organisation, workgroup, community and project/task groups). Study 1 is a field study that examines the association between meta-identification and outcomes in the natural context of employees working in their organisation, while Study 2 examines associations in the context of a smaller group in the form of people’s work team. Study 3 provides a quasi-experimental examination of the effect of meta-identification on outcomes in diverse groups. Studies 4 and 5 assign participants to novel groups (minimising the influence of pre-existing differences in the minimal group tradition of Tajfel et al., 1971) and experimentally assess the impact of meta-identification on outcomes including behavioural performance.

In all studies we examine the contribution of meta-identification to group experiences and outcomes and conduct additional analyses that examine whether the proposed relationships hold above and beyond people’s group identification. Moreover, even though the studies were not designed to examine interactions between meta-identification and group identification, we ran additional analyses to explore interactive effects (although results indicate no consistent evidence of interactions; see additional results in the Supporting Information). Project-related resources
including studies’ materials, preregistrations, data and code are available on the OSF project page: https://osf.io/ydbsa.1

5 | STUDY 1

Study 1 examined the concept of meta-identification in a sample of employees. As a field study, it served as an initial test of the relationships between meta-identification and outcomes in a context with high ecological validity. Specifically, we assessed the relationship between employees’ perceptions of meta-identification (within their organisation) and outcomes of interest. We hypothesised that higher levels of meta-identification would be associated with greater group meaningfulness, collective self-efficacy, organisational citizenship behaviour and perceived (subjective) group performance. We also conducted additional analyses to examine the extent to which these relationships hold when controlling for people’s group identification.

5.1 | Method

5.1.1 | Participants and design

We recruited a sample of 1200 employees residing in the United States with the help of the professional company Research Now that specialises in recruiting specific populations (in this case, employees in a range of organisations). The company charged 2.75 EUR per participant response, resulting in a total cost of 3300 EUR. The sample size of 1200 was determined by budget constraints and so we did not conduct an a priori power analysis.

Participants were eligible to participate if they worked full or part time. Exclusions based on failure to complete attention checks (e.g. ‘This is a control question – please select ‘strongly disagree’) resulted in a final sample of 992 employees working in a range of organisations. On average, participants were 48.83 years old (standard deviation (SD) = 15.15) and the majority were females (582 females, 408 males, 2 other or missing). The vast majority (80.14%; n = 795) worked full time, while the remaining participants worked part time (n = 196; 1 missing). On average, participants had 25.39 years of work experience (SD = 14.91), and they had spent 11.80 years working at their current organisation (SD = 10.38). The median size of the organisation participants worked for was 200 employees (interquartile range 35–2000).

5.1.2 | Procedures and measures

Participants were invited to participate in a survey about their experience working in their organisation. They responded to all items on 7-point scales ranging from 1 (strongly disagree) to 7 (strongly agree),2 unless indicated otherwise.

Meta-identification. Participants completed an adapted version of the four-item social identification (FISI) scale (Postmes et al., 2013) to assess meta-identification in their organisation. The instructions highlighted that the statements did not refer to their own relationship with the organisation but to other group (organisational) members’ relationship with the organisation (and in the item ‘I’ was replaced by ‘Other group members’). A sample item is ‘Other members of this organization identify with this organization’. This scale was highly reliable, α = .97.

Organisational identification. Participants also responded to Mael and Ashforth’s (1992) six-item organisational identification scale (α = .94; e.g. ‘This organization’s successes are my successes’).

Group meaningfulness. Participants responded to six items from May et al. (2004) assessing their experience of meaningfulness of the work they do in their organisation (α = .96; e.g. ‘The roles I perform in this organization are meaningful to me’).

Collective self-efficacy. Collective self-efficacy was measured using eight items (α = .97; e.g. ‘This organization has confidence in itself’ adapted from Guzzo et al., 1993).

Organisational citizenship behaviour. Eight items from Lee and Allen (2002) measured individuals’ engagement in organisational citizenship directed towards other members (α = .94; e.g. ‘How likely are you to help other members of this organization who have been absent’). The scales ranged from 1 (extremely unlikely) to 7 (extremely likely).

Perceived performance. We used three items from Lam et al. (2002) measuring individuals’ perception of their own performance (α = .96; e.g. ‘I perform my activities in this organization well’) and four items from Steffens et al. (2014) measuring individuals’ experience of their group performance (α = .97; e.g. ‘This organization as a whole displays high performance’).

5.2 | Results

Means, SDs, internal consistencies and zero-order correlations between variables are presented in Table 1. Meta-identification was positively associated with all outcomes (all ps < .001): group meaningfulness (r = .63), collective self-efficacy (r = .64), organisational citizenship (r = .26), perceived individual performance (r = .51) and perceived group performance (r = .61).

1 The registered hypotheses guided the design and tests of Studies 2, 3 and 5 (Study 4 was conducted prior to Study 2). These refer to main effects on group meaningfulness, collective self-efficacy, helping and performance. The pre-registration also included hypotheses for indirect effects through (a) meaningfulness and (b) collective self-efficacy to performance and organisational citizenship behaviour. Our sense is that these indirect effect analyses do not add a lot to overall understanding as all examined variables are conceptually interesting in their own right (regardless of how these variables are interrelated as examined in indirect effect analyses). Furthermore, indirect effects were not intended to be examined in all studies, and therefore, are not reported in detail here. However, additional analyses examining indirect effects for all studies are described in the Supporting Information. Further, we conducted an additional preliminary cross-sectional Study S1 that provided initial insights (not pre-registered and assessing only two outcomes of interest), which is reported in the Supporting Information.

2 Due to a technical programming error, all scales, except for group identification, had reversed answer anchors ranging from ‘strongly agree’ to ‘strongly disagree’. These scales were reversed so that higher scores indicate greater agreement.
5.2.1 | Additional analyses

We conducted regression analyses to determine whether meta-identification was associated with outcomes when controlling for individuals’ organisational identification. These results (including 95% confidence intervals) are shown in Figure 2a, and indicate that when controlling for people’s organisational identification, meta-identification was positively associated with all outcomes ($0.16 \leq \beta \leq 0.60, ps < .001$).

5.3 | Discussion

Study 1 explored the associations between meta-identification and outcomes in a field setting. As anticipated, results indicated that meta-identification was positively associated with group meaningfulness, collective self-efficacy, organisational citizenship behaviour and perceptions of higher performance at the individual and group level. These associations held when controlling for people’s organisational identification.

Although the findings from Study 1 provide some evidence from the field that meta-identification is associated with a range of outcomes, the evidence is limited in a number of ways. First, because the data are cross-sectional the results are subject to common-method bias (Podsakoff et al., 2003). Nevertheless, as Spector (2019) points out, the evidence is limited in a number of ways. First, because the data were cross-sectional designs cannot provide evidence of causality, they can be useful in providing initial indication of associations of interest (are X and Y related?), particularly when controlling for potential alternative explanations (as we did in the present study by controlling for people’s organisational identification). Second, because the study focused on large organisational groups people might know little about others – including about their identification. Accordingly, this gives us limited insight into the role of meta-identification in smaller interactive groups where people have a better understanding of others. In Study 2, we thus aimed to expand upon these findings by investigating meta-identification in smaller interactive workgroups.

6 | STUDY 2

Building on the initial support for the concept of meta-identification provided by Study 1 in a large-scale field setting, we examined meta-identification in the context of a smaller group: people’s workgroup. As in Study 1, we hypothesised that meta-identification in one’s workgroup would be associated with greater group meaningfulness, collective self-efficacy, organisational citizenship behaviour and perceived group performance.

6.1 | Method

6.1.1 | Participants and design

We used Prolific to recruit a total of 1306 participants from the United States ($n = 917$) and the United Kingdom ($n = 389$), allowing for the possibility that approximately 10% of the sample might need to be excluded based on specified exclusion criteria and failure on attention checks. Participants were paid £0.85 upon completion. The target sample size was based on a priori power analysis that revealed 1182 participants would be needed to be able to detect a potentially small effect size (of $d = 0.20$). Participants were eligible to participate if they (a) were 18 years of age or older, (b) worked at least part time and (c) were part of a work group of at least three people.

Removing people who failed fulfilling the eligibility criteria or one or more of the three attention checks (‘This is an attention check, select “strongly disagree”’) resulted in a final sample of 1213 (703 females, 501 males, 9 self-identified as ‘Other’), with a mean age of 33.11 ($SD = 10.14$). The vast majority of participants (72.55%; $n = 880$) were full time employed (328 were part time employed; the remaining indicated ‘other’ or had missing data). Participants worked in different organisations and there was no nesting of participants across

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Footnote from Study 2. Participants also conducted a linguistic priming procedure that aimed to manipulate people’s level of groupwork identification. The $d = 0.20$ refers to the difference between experimental conditions. This attempt failed and so cross-sectional results are reported here. The full description of the procedure and the results of the failed manipulation are described in the Supporting Information Additional Analyses.

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TABLE 1 | Study 1: Means, standard deviations, internal consistencies and intercorrelations between variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Meta-(organisational) identification</td>
<td>5.06</td>
<td>1.38</td>
<td>(.97)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Organisational identification</td>
<td>5.12</td>
<td>1.31</td>
<td>.27</td>
<td>(.94)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Meaningfulness</td>
<td>5.41</td>
<td>1.36</td>
<td>.63</td>
<td>.44</td>
<td>(.96)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Collective self-efficacy</td>
<td>5.54</td>
<td>1.29</td>
<td>.64</td>
<td>.30</td>
<td>.72</td>
<td>(.97)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Organisational citizenship behaviour</td>
<td>5.34</td>
<td>1.13</td>
<td>.26</td>
<td>.41</td>
<td>.24</td>
<td>.20</td>
<td>(.94)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Perceived individual performance</td>
<td>5.96</td>
<td>1.17</td>
<td>.51</td>
<td>.11</td>
<td>.59</td>
<td>.63</td>
<td>.18</td>
<td>(.96)</td>
<td></td>
</tr>
<tr>
<td>7. Perceived group performance</td>
<td>5.57</td>
<td>1.36</td>
<td>.61</td>
<td>.39</td>
<td>.67</td>
<td>.83</td>
<td>.20</td>
<td>.62</td>
<td>(.97)</td>
</tr>
</tbody>
</table>

Note: All variables were measured on, or recoded to form, 7-point scales. All correlations are statistically significant at $p < .001$. Cronbach alpha ($\alpha$) of each variable is indicated in parentheses.
workgroups or organisations. On average, participants had spent 4.57 years (SD = 4.33) working in their current workgroup. The median size of participants’ workgroup was seven members (interquartile range 5–12).

6.1.2 Measures

Participants responded on 7-point scales ranging from 1 (strongly disagree) to 7 (strongly agree) to the same measures as in Study 1 (see Table 2 and the Supporting Information for full description of measures for this and all subsequent studies). The only difference was that in this study we used the FISI (Postmes et al., 2013) rather than Mael and Ashforth’s (1992) measure to assess identification, to enhance comparability with meta-identification which, as in Study 1, was assessed using an adapted version of the FISI.

6.2 Results

6.2.1 Main analysis

Means, SDs, internal consistencies and zero-order correlations between variables are displayed in Table 2. Again meta-identification was positively associated with all outcomes (all ps < .001); greater group meaningfulness (r = .53), collective self-efficacy (r = .64),

\[ \beta = 0.52 \pm 0.58 \]  
\[ 0 = 0.2 \pm 0.39 \]

\[ \beta = 0.54 \pm 0.59 \]  
\[ 0 = 0.24 \pm 0.39 \]

\[ \beta = 0.52 \pm 0.47 \]
\[ 0 = 0.2 \pm 0.39 \]

\[ \beta = 0.54 \pm 0.49 \]
\[ 0 = 0.24 \pm 0.39 \]

\[ \beta = 0.62 \pm 0.47 \]
\[ 0 = 0.39 \pm 0.39 \]

\[ \beta = 0.54 \pm 0.49 \]
\[ 0 = 0.24 \pm 0.39 \]

\[ \beta = 0.62 \pm 0.47 \]
\[ 0 = 0.39 \pm 0.39 \]
organisational citizenship behaviour ($r = .44$), perceived individual performance ($r = .25$) and perceived group performance ($r = .51$).

### 6.2.2 Additional analyses

We conducted additional regression analyses to determine whether meta-identification is associated with outcomes when controlling for participants’ workgroup identification. As shown in Figure 2b, results indicated that, over and above workgroup identification, meta-identification was significantly associated with all outcomes ($1.11 \leq \beta < 46, p < .001$).

### 6.3 Discussion

Extending the findings of Study 1, meta-identification within the context of a smaller group – people’s workgroup – was significantly associated with key outcomes: greater group meaningfulness, collective self-efficacy, organisational citizenship behaviour and perceived...
TABLE 2  Study 2: Means, standard deviations, internal consistencies and intercorrelations between variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Meta-(workgroup) identification</td>
<td>5.39</td>
<td>1.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.87)</td>
</tr>
<tr>
<td>2. Workgroup identification</td>
<td>5.35</td>
<td>1.16</td>
<td>.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.88)</td>
</tr>
<tr>
<td>3. Meaningfulness</td>
<td>5.42</td>
<td>1.22</td>
<td>.53</td>
<td>.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.94)</td>
</tr>
<tr>
<td>4. Collective self-efficacy</td>
<td>5.45</td>
<td>0.99</td>
<td>.64</td>
<td>.57</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
<td>(.92)</td>
</tr>
<tr>
<td>5. Organisational citizenship behaviour</td>
<td>5.88</td>
<td>0.93</td>
<td>.44</td>
<td>.52</td>
<td>.55</td>
<td>.54</td>
<td></td>
<td></td>
<td>(.91)</td>
</tr>
<tr>
<td>6. Perceived individual performance</td>
<td>5.98</td>
<td>0.84</td>
<td>.25</td>
<td>.31</td>
<td>.35</td>
<td>.36</td>
<td>.36</td>
<td></td>
<td>(.90)</td>
</tr>
<tr>
<td>7. Perceived group performance</td>
<td>5.72</td>
<td>1.10</td>
<td>.51</td>
<td>.56</td>
<td>.55</td>
<td>.74</td>
<td>.53</td>
<td>.42</td>
<td>(.93)</td>
</tr>
</tbody>
</table>

Note: All variables were measured on 7-point scales. All correlations are statistically significant at \( p < .001 \). Cronbach alpha (\( \alpha \)) of each variable is indicated in parentheses.

individual and group performance. As in Study 1, these associations held when controlling for people’s workgroup identification.

7  | STUDY 3

In Study 3, we sought to extend upon the findings of our first two studies by examining meta-identification in the context of a quasi-experimental design. This involved participants first selecting three existing groups in their life before being randomly assigned to one of two conditions in which they were asked to respond to the group that in their view had relatively highest (vs. lowest) levels of meta-identification. We adopted this as an alternative method of assessing how naturally varying levels of meta-identification are associated with hypothesised outcomes. This procedure allowed us to examine meta-identification not only in work or task groups, but in a variety of different groups.

7.1  | Methods

7.1.1  | Participants and design

To obtain a sample of 788 participants to provide 80% power to detect a small effect between experimental conditions, we recruited 873 US-based participants from Prolific. Participants were paid £0.85 for completing the study. We allowed for the possibility that approximately 10% of the sample might need to be excluded based on the specified exclusion criteria. Participation was restricted to people who were 18 years of age or older and who had not participated in Study 2.
Removing people who failed attention checks (e.g. ‘This is an attention check; select ‘strongly disagree’; n = 50) resulted in a final sample of 823 (397 females, 419 males, 7 self-identified as other), with a mean age of 32.78 (SD = 12.57). The majority were employed full time (n = 393) or part time (n = 176) (of the remaining, 99 indicated ‘other’; 98 were unemployed, 31 were casual workers; 25 were retired; 1 was missing). Participants were randomly assigned to one of two conditions in a between-participants factorial design (meta-identification: low vs. high) as described below.

7.1.2 | Procedure

To control procedurally for group identification, participants were instructed to think of three groups to which they belonged and with which they identified similarly strongly. They were then asked to write down the names of these groups. Participants were then asked to rank these groups on the basis of the strength of other members’ identification by placing the highest meta-identification group at the top of the list, and the lowest meta-identification group at the bottom of the list. The instructions verbatim were

Now, think about the other members in each of these groups. How strongly do other members of the group identify with the group?

Rank the groups in terms of how strongly other members identify with the group. Place the group in which members identify most strongly with the top of the list, and the group in which members identify least strongly with at the bottom of the list.

Participants were then randomly assigned to one of two conditions in which they were told that all subsequent items would refer either to the group they ranked at the top of their list (high meta-identification condition, n = 399), or to the group they ranked at the bottom of their list (low meta-identification condition, n = 424). To bring their experiences with the group to life, participants were instructed to reflect on the group they had identified and discuss why they ranked it either at the bottom of the list (in the low meta-identification condition) or at the top (in the high meta-identification condition). Prompts were included to reflect on group members’ personalities, behaviours, or the way they interact with one another. Participants wrote for a total of two minutes, after which they were automatically advanced to the next page.

7.1.3 | Measures

After the initial task participants responded to the same measures as in Study 2 (see Table 3 and the Supporting Information for full description of measures), with agreement rated on 7-point scales.

7.2 | Results

7.2.1 | Manipulation check

A one-way ANOVA applied to meta-identification revealed a significant effect of the random allocation to conditions, F(1,821) = 260.50, p < .001. η² = .24. As expected, participants in the high meta-identification condition reported higher perceived meta-identification (M = 6.22, SD = 0.76) than participants in the low meta-identification condition (M = 5.16, SD = 1.09), d = 1.13. Accordingly, the procedure was successful.

7.2.2 | Main analysis

Means, SDs, internal consistencies and zero-order correlations between all variables are presented in Table 3. Table 4 presents means and SDs as a function of experimental condition together with relevant inferential statistics.

To examine experimental effects, we conducted a series of ANOVAs, which revealed significant effects on all outcomes (all ps < .001). As expected, participants in the high meta-identification condition experienced their group as being significantly more meaningful (d = 0.64) and self-efficacious (d = 0.56) than participants in the low meta-identification condition. Relative to participants in the low meta-identification condition, they also engaged in more organisational citizenship behaviours (d = 0.56) and perceived themselves to be performing better as both individuals and as a group (d = 0.28 and 0.41).

7.2.3 | Additional analyses

We then conducted regression analyses controlling for individuals’ group identification. These results are displayed in Figure 2c and indicate that, controlling for group identification, experimental condition was a significant positively predictor of meaningfulness, collective-self-efficacy and organisational citizenship (.18 ≤ Β ≤ .26, ps < .001), but not perceived individual (Β = -.02, p = .728) and group (Β = .03, p = .603) performance. We also ran additional exploratory analyses treating the study purely as a cross-sectional study in which measured meta-identification (rather than the quasi-experimental condition) is used as predictor in the regression when controlling for group identification. In these results, meta-identification was uniquely associated with all outcomes including perceived individual and group performance (see additional results in the Supporting Information).

7.3 | Discussion

Study 3 examined meta-identification in a quasi-experimental design. As hypothesised, participants in the high (vs. low) meta-identification
conditions perceived their group to be more meaningful and more capable, and they engaged in greater organisational citizenship. These associations also held when controlling for group identification. Meta-identification was also associated with increased perceptions of individual and group performance, although in this sample these effects did not persist when controlling for group identification. One reason for the lack of support for the link between meta-identification and perceived performance in Study 3 may be that, in contrast to the previous two studies that focused on task/work groups, in this study participants selected one of the diverse groups they were a member of. It is thus possible that meta-identification plays a less important role in perceived performance in groups that are not task or work groups. Nevertheless, additional cross-sectional analyses using measured meta-identification (rather than quasi-experimental condition) again identified a unique association between meta-identification and key outcomes above and beyond social identification.

Again, though, due to the quasi-experimental nature of the study we cannot infer causality because results might in part be due to unmeasured variables that co-vary with meta-identification. In light of this limitation, we conducted an additional more rigorous, experimental test of the impact of meta-identification that involved a full experimental manipulation of group assignment.

### Study 4

Extending previous findings, Study 4 aimed to provide a direct experimental test of the effect of meta-identification on key outcomes. While previous studies had assessed meta-identification within existing groups, Study 4 aimed to test these relationships in the context of an ad hoc group created for the purpose of the study. This approach is drawn from the tradition of the minimal group paradigm, which allows researchers to establish the fundamental underpinnings of group behaviour without concern that participants’ prior experience with the group and its norms contributes to effects (Tajfel et al., 1971). This study therefore reflected an experimental test of the hypothesis that meta-identification is a determinant of the various outcomes in which we are interested.

In Study 4, participants interacted in small groups that were randomly assigned to appear high or low in meta-identification before we assessed how meaningful they found the group and their organisational citizenship behaviour towards other group members. However, because the previous three studies uncovered relationships between meta-identification and perceived (subjective) performance, it remains unclear whether meta-identification is also associated with better objective performance. Another methodological advance was therefore to include objective behavioural measures that assessed their
individual contribution to the group on a behavioural task. A third-party coder who was blind to condition also rated group members’ helping behaviour during the task. Again we hypothesised that high (vs. low) meta-identification would result in an increase in all outcomes.

8.1 | Methods

8.1.1 | Participants and design

A total of 150 first-year undergraduate students were recruited in exchange for partial course credit. This number was largely determined by logistical constraints. Participants completed the tasks in groups of three. The sample comprised 38 males (25%) and 112 females (75%), ranging in age from 17 to 57 years ($M = 20.64$, $SD = 5.80$). The study employed a two-group (meta-identification: low vs. high) between-participants experimental design. Participant groups were randomly assigned to conditions.4

8.1.2 | Procedure

Groups of three participants were seated at individual computer stations separated by physical dividers. The experimenter briefed participants on the upcoming tasks and informed them that their computers were connected online to enable information to be shared among participants. The experimenter entered participant codes in each computer and informed participants that computers took a few seconds to connect online. Participants were then instructed to start the study.

Participants first wrote a short self-description (e.g. indicating their likes and dislikes, values, hobbies), then rated their reading and writing preferences (e.g. ‘I like using my imagination to write stories’) and finally suggested a team name. Participants were informed that their responses would be shared with their fellow group members. Following these tasks, participants received mock paragraphs containing the same information that their fellow group members ostensibly completed but which were actually identical for all participants. To enhance the realism of the online interaction, writing activities were timed and participants were instructed to wait at two separate time points to maintain the pace of the group and to allow supposed sharing of information between participants.

Following the completion of these tasks, participants completed the FISI to indicate their identification with their group (Postmes et al., 2013). To manipulate meta-identification, they were then provided with feedback about the extent to which other group members reported identifying with the group (excluding their own score). Participants in the low meta-identification condition ($n = 75$) were provided with information that their fellow group members had an average score of 3 of 7 (identified weakly with the group), whereas participants in the high meta-identification condition ($n = 75$) were told that their fellow group members had an average score of 6 of 7 (identified highly with the group). Participants in the same group were provided with the same information about others’ identification with their group.

Following the manipulation of meta-identification, participants moved to a group table in an adjoining room where they completed a performance task (described below). Participants then returned to their individual computers to respond to the final survey that assessed key outcomes.

8.1.3 | Measures

This study used largely identical measures as the previous studies. However, because we relied on actual performance and because data collection for this study started prior to data collection for Studies 2 and 3, it did not include measures of collective self-efficacy or self-rated performance of the form used in some of the previous studies. Participants responded to the same measures as Study 3 assessing group identification prior to the manipulation as well as meta-identification (a manipulation check), group meaningfulness and organisational citizenship behaviour in a survey after the performance task (see Table 5 and the Supporting Information for full description of measures). This survey also included the following additional measures.

Helping behaviour. In addition to individuals’ reported organisational citizenship behaviour, we obtained a third party rated measure of participants’ helping behaviour during the performance tasks. More specifically, an independent coder with a bachelor’s degree in psychology who was blind to participants’ experimental condition assessed each person’s helping behaviour using a behavioural coding scheme with four items relating to offering help, coordination behaviour, encouragement and facilitative body language (e.g. to what extent did the participant: ‘Offer help to other group members to complete the tasks’). Items were measured on a 5-point scale ranging from 1 (not at all) to 5 (a lot). To establish inter-rater reliability, a second independent rater blind to the condition rated a sample of 30% of the videos. The consistency between the two raters was high ($r = .80$), indicating reliable coding.

Performance. Participants completed Crown’s (2007) letter-word-sentence task which has been used to assess performance in past research (e.g. Greenaway et al., 2016b; Ronay et al., 2012). Participants were presented with three $4 \times 4$ letter grids consisting of 16 letters. Each group member, A, B and C, received one of these grids (all groups received identical grids). Team members were instructed to use their individual letter matrix to form words of three or more letters and then as a group to use these words to create sentences. They were instructed that a sentence had to consist of at least one word from every participant, and that only words generated from the grids could be used. Participants were given 10 min to complete the individual and group components of the task, and were free to allocate that time to different parts of the task as they saw fit.

4 Please note that, unlike Studies 2 and 3, this study was not pre-registered. This is because Studies 2 and 3 were conducted chronologically after Study 4, at a time when we had not engaged with the benefits of pre-registration.
TABLE 5 Study 4: Sample means, standard deviations and internal consistencies of all measures, as well as intercorrelations between variables between and within groups.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>7</th>
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</thead>
<tbody>
<tr>
<td>Correlations between groups</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Meta-(group) identification</td>
<td>5.02</td>
<td>1.20</td>
<td>(.87)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Group identification</td>
<td>4.42</td>
<td>1.11</td>
<td>.39</td>
<td>(.84)</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>3. Meaningfulness</td>
<td>3.65</td>
<td>1.25</td>
<td>.52</td>
<td>.36</td>
<td>(.92)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Organisational citizenship behaviour</td>
<td>5.29</td>
<td>1.09</td>
<td>.34</td>
<td>.19</td>
<td>.36</td>
<td>(.91)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Helping behaviour (other-rated)</td>
<td>2.89</td>
<td>.96</td>
<td>.15</td>
<td>-.06</td>
<td>.07</td>
<td>-.32</td>
<td>(.77)</td>
<td></td>
<td></td>
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<tr>
<td>6. Individual performance</td>
<td>13.75</td>
<td>6.67</td>
<td>-.04</td>
<td>-.03</td>
<td>-.02</td>
<td>-.09</td>
<td>-.03</td>
<td></td>
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</tr>
<tr>
<td>7. Contribution to group</td>
<td>2.88</td>
<td>1.82</td>
<td>.01</td>
<td>.08</td>
<td>.23</td>
<td>-.01</td>
<td>.02</td>
<td>.26</td>
<td>-</td>
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<tr>
<td>Correlations within groups</td>
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<tr>
<td>1. Meta-(group) identification</td>
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<td>2. Group identification</td>
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<td>3. Meaningfulness</td>
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<td>4. Organisational citizenship behaviour</td>
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<td>5. Helping behaviour (other-rated)</td>
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<tr>
<td>6. Individual performance</td>
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<td>7. Contribution to group</td>
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</tbody>
</table>

Note: Most variables were measured on 7-point scales ranging from 1 (strongly disagree) to 7 (strongly agree), except other-rated helping which was measured on 5-point scales and individual performance and contribution to group, which are objective, behavioural measures in word and sentence generation task. Correlations between groups larger than \( r = .36 \), and correlations within groups larger than \( r = .19 \) are statistically significant at \( p = .05 \).

Team members’ individual performance was measured by the total number of words created by each group member, while their contribution to the group was assessed by the total number of words created by each group member that were used to form sentences in the group task.

8.2 Results

8.2.1 Analytic strategy

Analyses were conducted using a mixed-effects linear regression with the R lme4 package (Bates et al., 2014) to account for the nested data structure (i.e. the fact that participants worked together within groups). We computed a random intercept model. This model allows groups to vary from one another in their average responses to the outcomes, accounting for variance associated with idiosyncratic differences across groups. To test the effect of the meta-identification manipulation, we compared a null model that included only a random intercept for group against an experimental model that included a random intercept for group and a fixed effect of the manipulation (low vs. high meta-identification).

8.2.2 Manipulation check

Mixed-effects linear regressions revealed a significant effect of the experimental manipulation (\( \beta = .89; p < .001 \)), indicating that participants in the high meta-identification condition reported greater meta-identification than participants in the low meta-identification condition. The manipulation was therefore successful.

8.2.3 Main analysis

Sample means, SDs and internal consistencies of all measures, and correlations between variables between and within groups are presented in Table 5. Table 6 presents means and SDs as a function of experimental condition and inferential statistics from the mixed-effects models.

Results from mixed-effects models indicated a significant positive effect of the experimental manipulation of meta-identification on participants’ reported organisational citizenship behaviour (\( \beta = .52, p = .008 \)), their exhibited helping behaviour (\( \beta = .59, p = .005 \)) and their contribution to the group (\( \beta = .58, p = .025 \)). These results indicate that participants in the high meta-identification condition reported engaging in more organisational citizenship towards other group members, and also exhibited more helping behaviour and contributed more to the group than their counterparts in the low meta-identification condition. The effect on group meaningfulness was marginally significant (\( \beta = .29, p = .089 \)), but there was no effect on individual performance in the word generation task (\( \beta = .05, p = .772 \)).

8.2.4 Additional analyses

We repeated the above analyses, controlling for people’s group identification. The results are shown in Figure 2d and are substantively
identical to those reported above. Specifically, the meta-identification manipulation continued to significantly predict organisational citizenship behaviour ($\beta = .52, p = .008$), helping behaviour ($\beta = .58, p = .005$) and contribution to the group ($\beta = .58, p = .024$) but remained a marginally significant predictor of group meaningfulness ($\beta = .29, p = .078$) and a non-significant predictor of individual performance ($\beta = .05, p = .775$).

8.3 Discussion

Study 4 examined the impact of meta-identification in a laboratory experiment in which participants were assigned to novel groups. The manipulation was successful and had a direct impact on participants’ reported organisational citizenship behaviour, as well as third party rated helping behaviour and their contribution to the group during a group task. At the same time, though, there was no effect of meta-identification on individual performance. Thus, while perceiving others to be highly identified with the group did not affect the degree to which people exerted more effort individually, it affected how much they contributed to the group’s output. The effects on organisational citizenship and helping behaviour also suggest that people in the high meta-identification condition were particularly motivated to support one another directly and only interacted online. Once again, participants were randomly assigned to novel groups designed to be high or low in meta-identification. Participants then completed the same measures that were used in Studies 1–3 assessing group meaningfulness, collective self-efficacy, organisational citizenship behaviour and perceived performance and the same behavioural measures as in Study 4. We predicted that high meta-identification would result in an increase in all outcomes relative to low meta-identification.

9 Study 5

Study 5 aimed to extend Study 4 findings by examining whether meta-identification would also have an impact on group outcomes in a more remote, virtual context in which participants could not see one another directly and only interacted online. Once again, participants were randomly assigned to novel groups designed to be high or low in meta-identification. Participants then completed the same measures that were used in Studies 1–3 assessing group meaningfulness, collective self-efficacy, organisational citizenship behaviour and perceived performance and the same behavioural measures as in Study 4. We predicted that high meta-identification would result in an increase in all outcomes relative to low meta-identification.

9.1 Methods

9.1.1 Participants and design

To accommodate a new meta-identification manipulation in an online environment, we were conservative in estimating our required sample size for Study 5, aiming to achieve 80% power to be able to detect a small effect ($d = 0.20$) between experimental conditions. This required a sample of at least 788 participants and accordingly we recruited 867 UK-based participants from Prolific to allow for the possibility that approximately 10% of the sample might need to be excluded based on the specified exclusion criteria. Participants were paid £1.80 upon completion of the study. Participation was restricted to people who were at least 18 years old and who had not participated in Studies 2 and 3.

Removing people who failed attention checks ($n = 53$) resulted in a final sample of 814 (536 females, 273 males, 5 self-identified as other), with a mean age of 37.00 ($SD = 12.10$). The majority were
9.1.2 | Procedure

Participants were invited to take part in an online study in which they would ostensibly work collaboratively with other team members to complete a series of tasks. The procedure was analogous to that of Study 4, but the study took place in a virtual environment and was also adapted in a few places (as described below) to render the procedure more engaging with the aim of providing a strong manipulation of meta-identification.

Participants were told that their four-person team would be selected from invitations sent out to other active participants on Prolific. After viewing a dynamic ‘loading’ symbol for 10 s, participants were ostensibly connected with their fellow team members. Participants were told their team would complete a series of tasks together. They then chose a personal avatar (from a grid of 36 avatars that ranged in hair style, femininity–masculinity, skin colour, etc.) and wrote a short summary about themselves, which would ostensibly be shared with other team members.

After a short wait, participants viewed the avatars and short self-descriptions provided by their team members. They then proceeded at their own pace to the next page where they were asked to generate a team name. They were asked to provide two suggestions, which would then be shared with their fellow team members. Participants were shown two team name suggestions from each team member. After this, they were asked to indicate the extent to which they identified with their team by responding to the FISI measure (Postmes et al. 2013; e.g. ‘I identify with this team’) on 7-point scales ranging from 1 (strongly disagree) to 7 (strongly agree), \( \alpha = .86 \).

Participants were then shown the supposed average identification score from their other team members (excluding their own score). In the high meta-identification condition \( (n = 409) \), corresponding text in the low meta-identification condition, \( n = 405 \), indicated in parentheses), participants were told ‘Your other team members identify strongly [weakly] with your team – Average Score: 5.67 [2.33] (out of 7)’. This was underscored by a visual representation of the average score on a slider ranging from 1 to 7 where the slider was positioned accordingly. Participants then responded to the measures (it was emphasised that these responses would not be shared with other team members) and they provided demographic information before being debriefed and thanked for their participation.

9.1.3 | Measures

Participants completed an adapted version of the behavioural performance task that we had used in Study 4 before responding to the same measures as had been used in Studies 1–3 (see Table 7 and the Supporting Information for full description of measures).

Behavioural performance. As in Study 4, participants completed Crown’s (2007) letter–word–sentence task to assess individual and group performance. The procedure was identical with the exception that in this study they were guided through each sub-task (in the previous study they had 10 min for both individual and group task) and given a set time of 2 min and 30 s for the task of generating words. As before, individual performance was assessed by the total number of words.

A difference to the Study 4 procedure was that here each participant completed the second task individually and there was no direct interaction between group members (i.e. they did not see other members’ activities or creations). Each participant was provided with the words they and their (supposed) team members had created in the preceding phase and they had 5 min to build sentences using as many words as possible, which they were told would be combined with other members’ sentences to constitute the group’s output. Their contribution to the group was assessed by the total number of words they used in building sentences.

9.2 | Results

9.2.1 | Manipulation check

A one-way ANOVA of the manipulation check revealed a significant effect of the manipulation, \( F(1,812) = 685.00, p < .001 \), in the expected direction, such that participants in the high meta-identification condition reported greater meta-identification \( (M = 5.15, SD = 0.89) \) than their counterparts in the low meta-identification condition \( (M = 3.15, SD = 1.26), d = 1.83 \). Again, then, the manipulation was successful.

9.2.2 | Main analysis

Means, SDs, internal consistencies and zero-order correlations between all variables are displayed in Table 7. Means and SDs as a function of experimental condition and inferential statistics are displayed in Table 8.

To examine the effect of the experimental manipulation, we conducted a series of ANOVAs. As expected, participants in the high meta-identification condition experienced their group as being significantly more meaningful \( (d = 0.42) \) and more self-efficacious \( (d = 1.00) \), and they reported greater willingness to engage in organisational citizenship behaviour \( (d = 0.48) \) than those in the low meta-identification condition. Participants in the high meta-identification condition also perceived themselves – both as individuals \( (d = 0.15) \) and as a

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5 This study was not pre-registered because of a coordination error. However, the full details are reported here. As described, this study assessed the same measures included in Studies 1–3, and in addition to these, it also assessed the two behavioural measures included in Study 4.
TABLE 7  Study 5: Means, standard deviations, internal consistencies and intercorrelations between variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Meta-(group) identification</td>
<td>4.15</td>
<td>1.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.92)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Group identification</td>
<td>4.36</td>
<td>1.22</td>
<td>.31</td>
<td></td>
<td>(.86)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Meaningfulness</td>
<td>4.00</td>
<td>1.42</td>
<td>.50</td>
<td>.61</td>
<td>(.95)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Organisational citizenship behaviour</td>
<td>5.15</td>
<td>1.22</td>
<td>.43</td>
<td>.51</td>
<td>.52</td>
<td>.56</td>
<td>(.94)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Perceived individual performance</td>
<td>4.31</td>
<td>1.37</td>
<td>.24</td>
<td>.31</td>
<td>.41</td>
<td>.39</td>
<td>.23</td>
<td>(.94)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Perceived group performance</td>
<td>4.59</td>
<td>1.23</td>
<td>.57</td>
<td>.47</td>
<td>.57</td>
<td>.77</td>
<td>.55</td>
<td>.45</td>
<td>(.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Individual performance</td>
<td>7.72</td>
<td>4.69</td>
<td>−.09</td>
<td>−.13</td>
<td>−.10</td>
<td>−.05</td>
<td>−.05</td>
<td>.16</td>
<td>−.05</td>
<td>−.05</td>
<td>−.05</td>
</tr>
<tr>
<td>9. Contribution to group</td>
<td>2.85</td>
<td>1.75</td>
<td>−.05</td>
<td>−.06</td>
<td>−.05</td>
<td>−.01</td>
<td>.04</td>
<td>.11</td>
<td>.05</td>
<td>.09</td>
<td>−.05</td>
</tr>
</tbody>
</table>

Note: All variables were measured on 7-point scales, except individual performance and contribution to group, which are objective, behavioural measures in word and sentence generation task. All correlations are statistically significant at p < .05 except for correlations under .10. Cronbach alpha (α) of each variable is indicated in parentheses.

TABLE 8  Study 5: Means (standard deviations) and inferential statistics of variables as a function of experimental condition.

<table>
<thead>
<tr>
<th></th>
<th>Low meta-identification</th>
<th>High meta-identification</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-(group) identification MC</td>
<td>3.15 (1.26)</td>
<td>5.15 (0.89)</td>
<td>685.00</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Group identificationa</td>
<td>4.36 (1.25)</td>
<td>4.37 (1.18)</td>
<td>0.03</td>
<td>.873</td>
</tr>
<tr>
<td>Meaningfulness</td>
<td>3.71 (1.40)</td>
<td>4.30 (1.38)</td>
<td>35.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Collective self-efficacy</td>
<td>3.87 (1.21)</td>
<td>4.98 (1.00)</td>
<td>204.50</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Organisational citizenship behaviour</td>
<td>4.87 (1.29)</td>
<td>5.44 (1.08)</td>
<td>46.08</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Perceived individual performance</td>
<td>4.21 (1.35)</td>
<td>4.41 (1.38)</td>
<td>4.63</td>
<td>.032</td>
</tr>
<tr>
<td>Perceived group performance</td>
<td>4.18 (1.26)</td>
<td>5.01 (1.04)</td>
<td>103.20</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Individual performance</td>
<td>7.82 (4.48)</td>
<td>7.62 (4.90)</td>
<td>0.37</td>
<td>.545</td>
</tr>
<tr>
<td>Contribution to group</td>
<td>2.81 (1.76)</td>
<td>2.88 (1.74)</td>
<td>0.26</td>
<td>.612</td>
</tr>
</tbody>
</table>

Note: All variables were measured on 7-point scales, except individual performance and contribution to group, which are objective, behavioural measures in word and sentence generation task. Abbreviation: MC, manipulation check.

aAssessed prior to the manipulation of meta-identification.

9.2.3  Additional analyses

We conducted regression analyses controlling for participants’ group identification to assess the impact of the manipulation over and above this identification. These results are presented in Figure 2e and indicate that, controlling for group identification, meta-identification was a significant positive predictor of all outcomes (ßs > .15, ps < .001) with the exception of individual performance (ß = .04, p = .549) and contribution to the group (ß = −.03, p = .634).

9.3  Discussion

Study 5 aimed to replicate results of previous experiments but in a virtual group context in which participants did not interact face to face with other members of the group to which they had been randomly assigned. Results showed that the manipulation was successful, and participants in the high meta-identification condition reported higher levels of group meaningfulness, collective self-efficacy and organisational citizenship behaviour. They also perceived individual and group performance to be higher compared to those in the low meta-identification condition. As in previous studies, these effects persisted when controlling for participants’ identification with their group.

However, unlike Study 4, there was no effect of the meta-identification manipulation on behavioural performance as assessed through a word–sentence generation task. There are various possible reasons for this, of which one likely relates to differences in the nature of the task. In contrast to the group contribution measure in
Study 4 (which was based on a group task that involved interaction between group members), participants in Study 5 completed this task individually without any group interaction and so despite instructions that their contribution would feed into group achievement, they might have understood this as an individual productivity task (similar to the preceding individual performance task). It is also noteworthy that the association between participants’ social identification and their contribution to the group was negative but not statistically significant, which contrasts with established findings of a positive link between social identification and (work) performance on behalf of the group or organisation (e.g. van Knippenberg, 2000; for reviews, see Greco et al., 2022; Lee et al., 2015) and so the absence of positive links with contribution to the group is not unique to meta-identification. Together, then, this suggests this pattern of results may be due in part to the nature of the behaviour assessed in this task.

Altogether, Study 5 shows that the experience of high meta-identification can emerge under conditions in which (a) participants have no prior experience of the group, (b) never see their fellow group members and (c) do not actually interact with their fellow group members. Moreover, the results indicate that even minimal conditions alter group experiences such that people experience a high meta-identification group as more meaningful, capable, and productive than a low meta-identification group.

9.4 | Additional summary analyses

In light of the novelty of meta-identification and, accordingly, the limited understanding of its relationship with group identification, we sought to examine the strength of the association between meta-identification and group identification across the studies by means of a meta-analysis. To this end, we used the R metafor package (Viechtbauer, 2010) to specify a random-effects model using the raw correlation coefficients concerning the relationship between meta-identification and group identification. Across the studies, meta-identification was overall positively associated with group identification \(r = .41, 95\% \text{ CIs } [0.30, 0.50]\). The forest plot of these effects is displayed in Figure 3, which shows that people’s meta-identification and group identification are positively correlated (with the magnitude of this correlation varying across contexts) but not overlapping, underlining that they are distinct constructs.

Furthermore, we estimated the association between meta-identification and all outcomes across the studies using the raw correlation coefficients pertaining to the relationship between meta-identification and outcomes. This indicated that meta-identification was positively – but variably – associated with key dependent variables: (a) group meaningfulness \(r = .60, 95\% \text{ CIs } [0.55, 0.65]\), (b) collective self-efficacy \(r = .62, 95\% \text{ CIs } [0.52, 0.70]\), (c) organisational citizenship behaviour \(r = .41, 95\% \text{ CIs } [0.32, 0.49]\), (d) perceived individual performance \(r = .37, 95\% \text{ CIs } [0.24, 0.48]\) and (e) perceived group performance \(r = .56, 95\% \text{ CIs } [0.52, 0.60]\).

We also conducted additional analyses to examine whether meta-identification and group identification interacted with one another in predicting outcomes. Results revealed no consistent evidence of interactions. However, there was limited indication of interactive effects (on only a minority of the dependent variables in Studies 1 and 2 only; see the Supporting Information for details).

10 | GENERAL DISCUSSION

In the present research we sought to advance social identity theorising by introducing the concept of meta-identification (i.e. the extent to which a person perceives others to identify with one’s group). We then examined the impact of meta-identification in an intragroup context (in relation to other members’ identification within an ingroup) on group life across five field, cross-sectional and experimental studies. Results of the five studies show that when people perceive other group members to identify strongly (rather than weakly) with the group, they experience the group as being (a) a more meaningful entity and (b) more capable of achieving the things it sets out to achieve. In addition, findings indicate that meta-identification affects the way people engage with the group and its members, leading to (c) greater willingness to engage in organisational citizenship behaviour by helping other group members and (d) higher perceived (and in some circumstances, actual) group performance.

Furthermore, the findings show that meta-identification is positively associated with people’s group identification, yet distinct from it. Across the studies, the correlation between meta-identification and group identification was of moderate strength \(r = .41\), with the magnitude of this association varying significantly across samples. In addition, analysis showed that the effects of meta-identification on outcomes held above and beyond individuals’ group identification (i.e. when controlling for group identification). This provides evidence of the distinctive impact on group life afforded by meta-identification.

Importantly, evidence supporting the relationships with outcomes emerged across different types of groups (e.g. organisational, project and community groups) and across contexts (e.g. natural contexts of a large sample of employees, as well as in smaller virtual and face-to-face
group experimental studies). The results from the experimental studies are significant in clarifying the causal effect of meta-identification on outcomes. In terms of the magnitude of the relationships with these outcomes, it is noteworthy that meta-identification has the strongest associations with collective self-efficacy and meaningfulness. Furthermore, and underlining the role of meta-identification in promoting collective processes, the results also indicate that it is more strongly associated with (perceived) group performance than with (perceived) individual performance.

11 | IMPLICATIONS FOR THEORY AND PRACTICE

Individuals’ psychological connection to groups is known to be a powerful determinant of the way they think, feel and behave (e.g. Ellemers, 2012; Greco et al., 2022; Lee et al., 2015). The present research advances existing knowledge by showing that an additional force on individuals’ attitudes and behaviour arises from the perception of other members’ identification with the group as captured by meta-identification. The core rationale we put forward is that meta-identification should unlock significant psychological resources associated with group membership in ways that enhance individuals’ engagement with the group and its members. In line with this idea, the studies show that meta-identification influences not only perceptions of the group’s purpose and efficacy but also people’s willingness to engage in citizenship by helping others and their willingness to contribute to the functioning and achievement of the collective. By revealing that the consequences of meta-identification occur largely over and above individuals’ group identification, the results also point to meta-identification as enabling an independent pathway to collective functioning. It thus appears that recognition of the worthiness of the group’s pursuit and willingness to go above and beyond for the group depend not just on whether ‘I am in it for the group’ but also on whether we perceive that ‘others are in it for the group’.

It is noteworthy that the effects of meta-identification in some studies and on certain outcomes (particularly collective self-efficacy and citizenship behaviour) were as large as (and in some cases larger than) those for group identification. These findings suggest dynamics of meta-identification might have a particularly important role to play in those psychological processes that rely heavily on collective organisation and mutual helping – such as collective resilience and achievement (Avanzi et al., 2015; Drury et al., 2019; Goddard et al., 2004; Watson et al., 2001) as well as emerging collective protest and activism (Thomas et al., 2009; van Zomeren et al., 2008).

Furthermore, there were some interesting nuances in the pattern of results relating to individual and group performance. First, there were fairly consistent links between meta-identification and perceptions of performance (with evidence of this in three of the four studies that assessed this relationship). Nevertheless, meta-identification appeared to have a stronger relationship with perceptions of group rather than individual performance. This highlights the possibility that the effects of meta-identification may be more pronounced for collective-level processes – those that implicate not just the personal self but an entire social group and its members. At the same time, the link between behavioural performance presented a more mixed picture, with a significant link between meta-identification and people’s contribution to the group in an interactive setting but no evidence that this links transfers to a virtual environment in which people worked individually. There would clearly be value in future research interrogating these links further to examine how meta-identification is associated with diverse individual and group behaviours and outcomes.

Importantly too, the present research contributes to the literature on meta-cognitive processes underpinning social judgment and behaviour (Petty et al., 2007), information processing and attitude development (Petty & Briñol, 2008; Rucker et al., 2008). The literature on social meta-cognition adds that people’s behaviour and cognition are shaped not only by their beliefs about their own mental states but also by their beliefs about others’ mental states (Briñol & DeMarree, 2012; Jost et al., 1998; Leslie, 1987). The present findings advance this literature by highlighting that people’s beliefs about others’ identification with a group is an important form of meta-cognition when it comes to understanding group experiences and behaviour. More particularly, beyond the idea of social meta-cognition (referring to mentalising about others’ states and thinking), the present work underlines the important role of what one might refer to as meta-social cognition capturing the broad range of beliefs about others’ social psychology such as dehumanisation (Kteily et al., 2016), meta-stereotypes (Vorauer et al., 1998) and meta-identification for individuals’ attitudes and behaviour.

Finally, the current research highlights possibilities for the strategic or purposeful targeting of meta-identification with the goal of influencing others’ behaviour. The social identity literature shows that individuals engage in a range of strategic processes to modulate and regulate their own (personal and group) psychology as well as that of others (e.g. members of the same or other, rival groups). For example, research shows that people are sensitive to the level of group identification of group leaders and that leaders’ group identification tends to transfer over time to the group identification of other members of their team or organisation (e.g. van Dick et al., 2007; van Dick & Schuh, 2010). Yet, as things stand, researchers have little knowledge of the various means (e.g. forms of communication, social interactions, social activities) through which such transfer processes unfold so as to affect other group members. The present research suggests that efforts to make high levels of meta-identification salient might be an additional way for leaders to shore up unity and energy in a group (e.g. in a new emerging movement), while efforts that emphasise low meta-identification might be a way of sabotaging and undermining collective coordination (e.g. in rival groups; Maskor et al., 2020).

12 | LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The present research is, of course, not without limitations and improving upon these presents avenues for future research. First, although our studies examined a range of experiences and outcomes (including
cognitions and actual behaviour), they are not exhaustive. In this regard, there would be value in examining whether and how processes of meta-identification affect a range of additional mechanisms and outcomes (e.g. trust, cohesion), beyond those examined here, that are important for individual and group functioning and achievement (e.g. coordination, social influence, psychological safety, and individual and collective well-being).

Second, beyond the various contexts that we investigated (individual, group, face to face, virtual) it would be worthwhile to explore a broader range of contexts in which meta-identification may play a role. For example, it would be valuable to broaden the examination of meta-identification by considering other collective challenges (e.g. collective protest, groups experiencing significant setbacks, groups in intergroup conflict or competition) and associated dynamic changes (examining the development of meta-identification over longer periods of time), and in other contexts including intergroup settings (e.g. relating to perceptions of outgroup members’ identification with one’s group). Further, our studies were conducted with different samples across a few different countries (United States, Australia, United Kingdom). Even though this allows some degree of generalisability, there is a need to establish the role of meta-identification in a broader sweep of (non-western and non-WEIRD) countries and across a wider range of groups.

Third, beyond examination of the distinct role of meta-identification over and above group identification examined here, it will be important in future work to explore other potential catalysts to and boundary conditions of the impact of meta-identification. For example, the capacity for high levels of meta-identification to contribute in positive ways to group life may vary as a function of various other characteristics such as (a) homogeneity in meta-identification (e.g. the degree to which perceived levels of others’ identification with a group are similar and shared), (b) clarity or strength of the group prototype (e.g. the degree to which people have well vs. poorly developed ideas of what the group is actually about and wants to achieve; Bartel & Wiesenfeld, 2013) or (c) multiple meta-identifications (i.e. the degree to which people have more or less aligned meta-identification perceptions across multiple groups).

13 | CONCLUSION

One for all and all for one.

Alexandre Dumas, The Three Musketeers

The present program of research advances the literature on social identity and group processes by introducing and examining meta-identification – perceptions of others’ identification with one’s group. Our findings show that meta-identification within an ingroup makes an important contribution to a range of group experiences and outcomes including how meaningful and agentic people experience their group to be as well as how willing they are to engage in citizenship by helping others and contribute to collective achievement. Furthermore, these relationships generally hold when controlling for group identification – an observation that underlines the unique contribution of this meta-process to group functioning. Groups thus benefit not only from having highly identified individuals but also from those individuals’ perceiving others in the group to also have a strong sense of identification. Indeed, people’s perception of other ingroup members’ identification appears to be a key contributor to the energisation of the group as a whole – lending substance to the musketeering sense that this is an entity in which there is both one for all and all for one.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

All project-related materials including study materials, preregistrations, data and code are available via the open science framework: https://osf.io/ydbsa/

ETHICS STATEMENT

The manuscript adheres to ethical guidelines in the APA code of conduct and authors’ national ethics guidelines. The project received ethical approval from the fifth’s author institution (EC-BSS: #17132-O; Study 1) and the first author’s departmental ethics committee (#17-PSYCH-4-78-JH; Studies 2 and 3), Bellberry Human Research Ethics Committee (#2016-04-337; Study 4), and institutional ethics committee (#2017002036; Study 5).

TRANSPARENCY STATEMENT

The studies do not include patients as participants (all study participants provided informed consent). The paper does not reproduce material from other sources.

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REFERENCES


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