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# Just do it or do it right? How regulatory mode relates to perceived responsibility and opportunity in collaborations

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ABSTRACT

In many contexts, people collaborate with others to complete tasks. Collaboration provides *opportunities* to achieve goals (e.g., to combine expertise and split workload), but also *responsibilities* to ensure that things go well (e.g., that work assignments are appropriate and that different contributions are taken into account). Successful collaboration likely requires both types of individuals—those who consider the opportunities and those who recognize the responsibilities. But how can these people be identified? The present research studied the role of people's regulatory mode as predisposing them to focus on the opportunity or responsibility of collaboration. Going beyond prior work, we predicted that a locomotion mode to "move on" towards desired outcomes would primarily be associated with perceiving collaboration as an opportunity to do so; in contrast, an assessment mode to evaluate how to "do things right" should be linked to perceiving collaboration primarily as a responsibility. Seven studies ($N = 1318$) across multiple study contexts found meta-analytical evidence for the predicted relations (more so than for alternative relations). Accordingly, the way in which people typically regulate behavior towards desired end-states contributes to understanding how they likely perceive (and potentially engage in) collaborations with others.

## 1. Introduction

Be it at university, at work, or during leisure sports activities: in many contexts, people collaborate with others to complete joint tasks. On the one hand, this offers an *opportunity* to benefit from the efforts and insights of multiple individuals (e.g., Brodbeck et al., 2007). On the other hand, coordinating individual efforts is a notoriously difficult *responsibility* and can involve considerable transaction costs (relating, for instance, to the coordination of individual efforts, the avoidance of free riding among others or even oneself, or taking others' opinions into account; e.g., Harvey & Fischer, 1997). Successful collaboration, thus, requires attention to both types of concerns. In practice, however, these concerns are not naturally compatible. This can cause individuals as well as groups to focus especially on one aspect while neglecting the other. Successful collaboration, thus, requires an awareness of who is likely to focus on what, in order to secure a good balance between the two.

Consider the example of a student in class. The professor announces that the next assignment will be completed together with one or two fellow students. The student could now, on the one hand, recognize all the *opportunities* that this collaboration provides to pursue and achieve goals—such as to combine efforts and expertise, or to split the workload. This student may perceive working together with others in class as offering additional possibilities to easily and effectively reach goals. On the other hand, the student could also recognize all the *responsibilities* that come along with collaborating—such as the need to ensure that work assignments are appropriate, to specify different tasks and subgoals, and to take care that both (or all) contribute to the end result. In this latter case, working together in class may represent an additional obligation to ensure that individual efforts are coordinated and combined in making progress towards the joint goal. Given that successful collaboration likely requires the consideration of both—the opportunities provided by joint work and the responsibilities associated with it—we studied the individual-level correlates of people's tendency to perceive a collaboration as an opportunity or responsibility.

To be more precise, we tested the idea that people perceive (and potentially approach) collaborations with others differently depending

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on their dominant self-regulation strategy. In regard to this strategy, we focused on whether they generally strive to "move on" from state to state and "just do it" (a *locomotion* mode) and/or whether they generally critically compare options and strive to "do things the right way" (an *assessment* mode; Kruglanski et al., 2000). As will be outlined in more detail below, we predict that a locomotion mode is predominantly associated with perceiving the opportunities of collaboration, while an assessment mode is primarily associated with perceiving the responsibilities of collaboration.

The present research tested these predictions across a number of different collaborative settings. This allowed us to contribute to a deeper understanding of the (inter-individual) preconditions under which each perception of a collaboration becomes more likely—and, especially, how people's general tendency to regulate their behavior relates to their awareness of either aspect of collaborating with others.

### 1.1. How people regulate their behavior and perceive a collaboration

Regulatory mode theory (Kruglanski et al., 2000) proposes that when people self-regulate their behavior, that is, govern and direct attention, resources, and action towards their goals, they can make use of two foci: They may assess the value of the goal they strive to attain, compare the desired outcome with alternative outcomes, and weigh strategies to find the best option in order "to do things right"—in short, they can engage in *assessment*. In contrast, they may also make an effort to move on from the current state towards the goal they strive to attain, seek to "get on with it", and taking the next step without distraction by the possibility of adverse conditions or lack of clarity about the progress made—in other words, they can engage in *locomotion*.

Assessment and locomotion mode represent two orthogonal dimensions of self-regulation that are both important (and independent) in contributing to goal achievement (Higgins et al., 2003; Kruglanski et al., 2000; Kruglanski et al., 2010; Kruglanski et al., 2015; for evidence see e.g., Pierro et al., 2006; see also Chernikova et al., 2016). Although regulatory mode can be elicited by situational conditions, it also has been found to vary chronically across individuals—indicating relatively stable individual differences. The present research especially focuses on people's chronic regulatory mode as being linked to how they tend to perceive a collaboration (and potentially will engage in it).

Indeed, regulatory mode influences how people respond to their (social) environment. For people with a strong locomotion mode, the main motivational concern is starting to act (e.g., Pica et al., 2015) and *moving on* towards desired end-states, rather than staying inactive, slowing down actions, or re-evaluating different possibilities. As such, locomoters seek to move on without much consideration of their social environment beyond the task at hand (Kruglanski et al., 2000). This means that this mode of self-regulation plays out in the way how people treat and respond to others; for instance, people in a locomotion mode are known to prefer leaders who give them autonomy (i.e., opportunity; Pierro et al., 2009) and are more motivated by (transformational) leaders who communicate visions and see chances for success (Benjamin & Flynn, 2006). Moreover, locomoters put interest in other people (only) as long as these others are relevant to reach an important goal (Orehek et al., 2014). These results can be interpreted as that locomoters tend to perceive more (and respond more to) opportunities to be successful in a given situation.

Building upon these notions, we predict that people's locomotion mode is primarily associated with perceiving collaboration more as an opportunity (Hypothesis 1). At the same time, there is no indication in the literature that the locomotion mode should contribute to the perception of responsibilities associated with collaboration.

In contrast, *assessors* are more concerned about where they stand and how things are being done (rather than doing just anything, which is more the case in a locomotion mode). People with a strong assessment mode seek to compare many options to achieve a goal (Kruglanski et al., 2000). Being in such a comparative state, assessors critically evaluate the value of the goals in focus and the means to achieve these in relation to relevant standards and potential alternatives (i.e., alternative goals or means). As a result, assessors are known to be highly sensitive to those around them; this includes strong sensitivity to social norms, feedback from others, the specific type of help that others need (Cavallo et al., 2016), and the potential demands they need to fulfill (e.g., at work; De Carlo et al., 2014). Moreover, assessors prefer that their leader includes them more in making decisions (e.g., they prefer an advisory leadership style; Kruglanski et al., 2007). All these tendencies correspond to perceiving collaboration as a responsibility to take care of things. People who perceive collaborations as entailing responsibilities during goal pursuit are also more aware of demands and concerns that may come with a collaboration—such as considering others' task contribution or ensuring their engagement (i.e., concerns they would not have if they were to work individually). Because people with a strong assessment mode strive to gather all information needed and critically evaluate what to do before they proceed, they are more likely to perceive the responsibilities of a collaboration.

As a result, we predict that an assessment mode is primarily associated with perceiving collaboration more as a responsibility (Hypothesis 2). Conversely, people with a strong assessment mode should not be particularly prone to realize the opportunities associated with collaborations.

We conducted seven studies to test these predictions. Doing so allowed us to bring together (a) work on regulatory mode as a well-established predictor of how people generally regulate their behavior (Kruglanski et al., 2000) with (b) a newer aspect of whether people perceive social situations as opportunity/responsibility. With regard to the latter aspect (b), prior work focused on how people perceive (or construe) specific social *roles* (i.e., a high-power role); it highlighted how *situational* aspects change the perception of power (as responsibility or opportunity; e.g., Sassenberg et al., 2012; Scholl, Sassenberg, et al., 2018; Scholl et al., 2017). Going beyond this, the present work focuses on the perception of *collaboration* more generally and the role of people's regulatory mode. This combination contributes both to a deeper understanding of the correlates of regulatory mode in social contexts, and of the correlates of perceived responsibility and opportunity in collaboration on the inter-individual, self-regulatory level.

### 1.2. The present research

We tested the predicted relations in seven studies ($N = 1318$) using different hierarchical and non-hierarchical collaborative settings (e.g., solving a joint task in a team and competing against another team). This variety served to ensure the generalizability of findings. All studies assessed regulatory mode and people's perception of collaboration (in general when approaching situations or with regard to a team task being implemented). To improve readability, we here briefly describe the general procedure across studies; more detailed information on samples (see also Table 1), procedures, measures, power analyses, and descriptive statistics for each individual study is reported in the Supplement.

Please note that we report all studies that we conducted so far assessing the relation between regulatory mode and perceived responsibility/opportunity. We performed individual analyses for each study as well as an internal meta-analysis across the results of all studies together (McShane and Böckenholt, 2017). Accordingly, we report both the results of each individual study (Table 3) and results on the meta-analysis; because results across individual studies can vary and the meta-analysis does provide a more parsimonious, conclusive test that allows for testing the *robustness* of findings across a large data set ($N = 1318$), we particularly focused on the latter results in interpreting the findings.

For the sake of transparency, please note that in Studies 1–5, we also examined whether the relation between regulatory mode and perceived opportunity/responsibility depends on people's experimentally induced level of power (high versus low, De Wit et al., 2017; Sassenberg et al.,

**Table 1**
Overview of studies (type of study, sample, and sensitivity analysis).

| Study | Type of study | *N* | females | $M_{age}$ (*SD*); range | Effect size *r* (*sensitivity analysis*) |
|---|---|---|---|---|---|
| 1 | Lab study | 205 | 153 | 22.74 (3.02); 18–33 | 0.19 |
| 2 | Lab study | 149 | 95 | 23.15 (3.33); 18–35 | 0.23 |
| 3 | Online (via MTurk) | 178 | 78 | 34.67 (9.64); 19–69 | 0.21 |
| 4 | Lab study | 198 | 152 | 23.31 (3.22); 18–35 | 0.20 |
| 5 | Online (university list) | 273 | 188 | 22.75 (3.49); 18–36 | 0.17 |
| 6 | Lab study | 171 | 120 | 22.92 (3.77); 18–35 | 0.21 |
| 7 | Lab study | 144 | 101 | 22.49 (3.29); 18–34 | 0.23 |

*Note*. Sensitivity analysis for 1-β = 0.80.

2012; Scholl, De Wit, et al., 2018); to do so, these studies included a between-participants manipulation of power-level and/or construal of power. We checked in additional analyses if any effects of the current work are qualified by the manipulated factor(s); however, because this was overall not the case (see Detailed Analyses in the Supplement), we do not further discuss the experimental manipulations in the following. Studies 6 and 7 assessed people's regulatory mode and general perception of collaborations (without experimental conditions for these studies; after a set of other experiments in the lab).

For lab studies, data collection was scheduled for and finished after one to two weeks; for online studies, data collection was finished once the minimum ideal sample size was reached. We started to analyze data once each study's data collection was finished. All participants gave informed consent to participate.

## 2. Methods across Studies 1–7

Information about participants (demographics etc.), type of study, and effect size results for a sensitivity analysis (for 1-β = 0.80) for each study is presented in Table 1.

The general procedure across studies was similar. In our lab studies (Studies 1, 2, 4, 6, 7), participants completed the study in private cubicles with up to six participants in the lab at a time. As an introduction, participants in Studies 1, 2 and 4 learned that they would engage in a *collaboration* with (one or two) other participant(s) in the lab, playing a competitive game against another team. They received some information about the game and engaged in a few preparatory tasks to make the collaborative setting more realistic and vivid. Afterwards, participants reported their perceived *responsibilities* and *opportunities* (regarding the collaborative within the game?) ("How do you perceive the upcoming joint task?", for responsibility: e.g., "I think about how my decisions impact others"; for opportunity: e.g., "I make use of possibilities to be successful"; Scholl et al., 2017), their *regulatory mode* ("How will you approach the upcoming joint task?"; for locomotion: e.g., "I will not mind doing things even if they involve extra effort"; for assessment: e.g., "I will critically evaluate my work very often"), and further control measures. Details about the scales used in each study are depicted in Table 2. Afterwards, participants received a debriefing.

In the online Studies 3 and 5, we presented participants with a *work scenario* in which they imagined engaging in a team task. We again assessed their perceived responsibility and opportunity with regard to

**Table 2**
Overview of implemented study context and scales used.

| Study | Study context | Measures for regulatory mode | Measures for perception of collaboration |
|---|---|---|---|
| 1 | "Team play" in a competitive game | Regulatory mode regarding the task:<br>• Locomotion: 8 items (e.g., "I will not mind doing things even if they involve extra effort"; α = 0.63)<br>• Assessment: 8 items (e.g., "I will critically evaluate my work very often", α = 0.61)<br>1 = *not at all* to 7 = *completely*; correlated positively, $r(205) = 0.33$, $p < .001$ | Perception of collaboration regarding the task:<br>• Responsibility: 4 items (e.g., "I feel responsible for the situation"; α = 0.86)<br>• Opportunity: 4 items (e.g., "I make use of possibilities to be successful"; α = 0.83)<br>1 = *not at all* to 7 = *completely*; $r(205) = 0.57$, $p < .001$ |
| 2 | "Team play" in a competitive game (estimation task) | Regulatory mode regarding the task:<br>• Locomotion: 8 items (same as Study 1; α = 0.52)<br>• Assessment: 8 items (same as Study 1, α = 0.79)<br>1 = *strongly disagree* to 9 = *strongly agree*; $r(149) = 0.54$, $p < .001$ | Perception of collaboration regarding the task:<br>• Responsibility: 4 items (α = 0.79)<br>• Opportunity: 4 items (α = 0.72)<br>1 = *not at all* to 7 = *completely*; $r(149) = 0.22$, $p = .007$ |
| 3 | Work scenario advertising a new platform | General regulatory mode:<br>• Locomotion: 12 items (e.g., "I don't mind doing things even if they involve extra effort"; α = 0.88)<br>• Assessment: 12 items (e.g., "I often compare myself with other people", α = 0.87)<br>1 = *strongly disagree* to 6 = *strongly agree*; $r(178) = 0.04$, $p = .645$ | Perception of collaboration regarding the task:<br>• Responsibility: 5 items (α = 0.75; "I think about how my decisions impact others in the company")<br>• Opportunity: 5 items ("I can follow my own ideas"; α = 0.83)<br>1 = *not at all* to 9 = *completely agree*<br>$r(178) = 0.42$, $p < .001$ |
| 4 | "Distribution game" with another participant | Regulatory mode regarding the task:<br>• Locomotion: 4 items (e.g., "I can't wait to start the next round of the game"; α = 0.44)<br>• Assessment: 4 items (e.g., "I enjoy evaluating my own estimations in the game", α = 0.60)<br>1 = *strongly disagree* to 9 = *strongly agree*; $r(198) = 0.31$, $p < .001$ | Perception of collaboration regarding the task:<br>• Responsibility: 5 items (e.g., α = 0.92)<br>• Opportunity: 5 items (α = 0.79)<br>1 = *not at all* to 7 = *completely agree* $r(198) = 0.37$, $p < .001$ |
| 5 | Work scenario in a start-up enterprise | General regulatory mode:<br>• Locomotion: 6 items (e.g., "I don't mind doing things even if they involve extra effort"; α = 0.72)<br>• Assessment: 6 items (e.g., "I often critically evaluate | Perception of collaboration regarding the task:<br>• Responsibility: 5 items (α = 0.76)<br>• Opportunity: 5 items (α = 0.81)<br>1 = *not at all* to 7 = *completely agree* $r(273) = 0.32$, $p < .001$ |

(*continued on next page*)

**Table 2** (*continued*)

| Study | Study context | Measures for regulatory mode | Measures for perception of collaboration |
|---|---|---|---|
| | | my decisions", α = 0.66)<br>1 = *strongly disagree* to 7 = *strongly agree*; *r* (273) = 0.47, *p* < .001 | |
| 6 | Approaching situations in general | General regulatory mode:<br>• Locomotion: 12 items (e.g., "I don't mind doing things even if they involve extra effort"; α = 0.81)<br>• Assessment: 12 items (e.g., "I often critically evaluate my decisions", α = 0.75)<br>1 = *strongly disagree* to 7 = *strongly agree*; *r* (171) = 0.147, *p* = .055 | Perception of collaboration in general:<br>• Responsibility: 5 items (α = 0.86)<br>• Opportunity: 5 items (α = 0.72)<br>1 = *not at all* to 7 = *completely agree* *r*(171) = 0.13, *p* = .090 |
| 7 | Approaching situations in general | General regulatory mode:<br>• Locomotion: 12 items (α = 0.67)<br>• Assessment: 12 items (α = 0.71)<br>1 = *strongly disagree* to 7 = *strongly agree*; *r* (144) = 0.11, *p* = .207 | Perception of collaboration in general:<br>• Responsibility: 5 items (α = 0.77)<br>• Opportunity: 5 items (α = 0.77)<br>1 = *not at all* to 7 = *completely agree* *r*(144) = 0.09, *p* = .295 |

*Note*. The perception of collaboration measure was similar across studies (Scholl et al., 2017), but used a short version (4 items) in Studies 1–2, and the longer full version in Studies 4–7 (5 items; same as Studies 1–2 plus 1 item;); Regulatory mode scales were all based on the measure from Kruglanski et al. (2000; 12 items); Studies 3,6,7 used the full scales, Study 5 a shortened version; Studies 1,2,4 used a shortened version with only those items that could be applied to the respective task (collaborative) context.

this collaboration as well as their regulatory mode in general when approaching situations.

In our lab Studies 6 and 7, participants learned that we were interested in how people generally approach situations. They were then asked to indicate how they generally approach situations in their undergraduate studies or private life; to do so, they completed the scales on the responsibility and opportunity they generally perceive in collaborative, high-power situations (adapted from Scholl et al., 2017), as well as their regulatory mode in general when approaching situations (see Table 2; scales from Kruglanski et al., 2000). More detailed information about the procedure for each study is presented in the Supplement.

## 3. Results across Studies 1–7

Based on the similarities in study design, we applied identical analysis procedures across studies. We expected that (1) a locomotion mode would be primarily associated with more perceived opportunity and that (2) an assessment mode would primarily be linked to more perceived responsibility.

### 3.1. Results for individual studies

Multiple regression analyses tested this separately for each study. Note that our predictors, assessment and locomotion, likely share some variance, accordingly, in each analysis on a particular regulatory mode, we controlled for the respective other mode. To be precise, (1) we regressed locomotion mode on opportunity (while controlling for assessment mode); and (2) we regressed assessment mode on responsibility (while controlling for locomotion mode). Regression results for each study are presented in Table 3; many individual studies supported our hypotheses, but did also yield some unpredicted correlations (e.g., between locomotion and responsibility).

### 3.2. Results from meta-analyses

We then meta-analyzed results to test the robustness of effects across all collected data. To do so, we calculated mean effect sizes (*r*), weighed for sample size, for (1) the relation between assessment mode and responsibility (controlling for locomotion mode) and (2) the relation between locomotion mode and opportunity (controlling for assessment mode). We used the *R* package 'metafor' (version 2.0–0) for the meta-analyses.

In line with Hypothesis 1, the stronger people's locomotion mode was, the more they perceived collaboration as opportunity, $r = 0.308$, $SE = 0.03$, $p < .001$, 95% CI [0.250; 0.366], see Fig. 1a. This means that locomoters reported perceiving greater opportunity in collaborating with others. Moreover, assessment mode was mildly related to perceived opportunity, and clearly with a much smaller effect size than locomotion mode, $r = 0.074$, $SE = 0.03$, $p = .020$, 95% CI [0.012; 0.136]; Fig. 1b.

Similarly, in line with Hypothesis 2, the meta-analytical findings showed that the stronger people's assessment mode was, the more they perceived collaboration as responsibility, $r = 0.245$, $SE = 0.04$, $p < .001$, 95% CI [0.165; 0.324], see Fig. 2a. Accordingly, assessors reported greater responsibility in collaborating with others. Interestingly, additional results showed that, also, a locomotion mode was linked to more perceived responsibility; however, this relation was less strong, $r = 0.156$, $SE = 0.04$, $p < .001$, 95% CI [0.087; 0.225], see Fig. 2b.

In sum, these results support our predictions: The more people were in an assessment mode to "do things right", the greater was (primarily) the responsibility they perceived—with regard to their regulatory mode, be it with regard to how they generally approached situations in life or how they approached the specific collaborative contexts implemented; in contrast, the more they were in a locomotion mode to "just do it", the greater the opportunities they perceived in these (general and specific) situations.

Unexpectedly, results also yielded correlations between the respective other pair (assessment and opportunity, locomotion and responsibility), though less strongly so. In both cases, the assumed predictor is stronger than the respective other regulatory mode (and the CI of the predictor does not include the mean effect size of the respective other).

Note that as we considered correlations, one can also analyze these patterns the other way around—that is, test how perceived responsibility/opportunity (controlling for the respective other) contribute to predicting an assessment or a locomotion mode; doing so yields a highly similar pattern of results, which we report in the Supplement for the interested reader.

## 4. General discussion

The present work examined how people's regulatory mode relates to the perception of collaborating with others as responsibility and/or opportunity. The results of the meta-analyses across all individual studies largely confirmed our predictions, showing that locomoters more likely perceived collaboration as opportunity (Hypothesis 1) and that assessors more likely perceived collaboration as responsibility (Hypothesis 2). Notably, we also found other correlations, especially that a locomotion mode is also associated with greater perceived responsibility. This suggests that even though locomoters may tend to perceive opportunities more easily, they do not necessarily neglect the responsibility that a collaboration may bring. It may be that due to the oftentimes high interdependence in collaborative settings, locomoters' tendency to "move on" may include mobilizing collaboration partners to do the same; this could become evident in a sense of responsibility for

**Table 3**
Results from regression analyses for each study testing how regulatory mode (entered as predictors) is associated with perceived responsibility or opportunity, respectively.

| | Outcome | *Predictor* (*in italics*) & control variable | *B* | *SE* | β | *t* | *p* | Effect size *r* |
|---|---|---|---|---|---|---|---|---|
| Study 1 | Responsibility | Locomotion | 0.38 | 0.12 | 0.24 | 3.30 | .001 | 0.23 |
| $N = 205$ | | *Assessment* | 0.16 | 0.12 | 0.10 | 1.35 | .179 | 0.09 |
| | Opportunity | *Locomotion* | 0.42 | 0.10 | 0.29 | 4.07 | <.001 | 0.27 |
| | | Assessment | −0.04 | 0.11 | −0.03 | −0.37 | .712 | −0.03 |
| Study 2 | Responsibility | Locomotion | 0.16 | 0.08 | 0.17 | 1.96 | .052 | 0.16 |
| $N = 149$ | | *Assessment* | 0.26 | 0.07 | 0.34 | 3.90 | <.001 | 0.31 |
| | Opportunity | *Locomotion* | 0.34 | 0.09 | 0.34 | 3.64 | <.001 | 0.29 |
| | | Assessment | 0.02 | 0.07 | 0.02 | 0.26 | .792 | 0.02 |
| Study 3 | Responsibility | Locomotion | 0.50 | 0.12 | 0.28 | 4.05 | <.001 | 0.29 |
| $N = 178$ | | *Assessment* | 0.38 | 0.11 | 0.24 | 3.49 | .001 | 0.25 |
| | Opportunity | *Locomotion* | 0.73 | 0.11 | 0.45 | 6.80 | <.001 | 0.46 |
| | | Assessment | 0.22 | 0.09 | 0.16 | 2.35 | .020 | 0.17 |
| Study 4 | Responsibility | Locomotion | 0.18 | 0.07 | 0.178 | 2.48 | .014 | 0.17 |
| $N = 198$ | | *Assessment* | 0.21 | 0.06 | 0.24 | 3.35 | .001 | 0.23 |
| | Opportunity | *Locomotion* | 0.20 | 0.06 | 0.25 | 3.46 | .001 | 0.24 |
| | | Assessment | −0.02 | 0.05 | −0.02 | −0.30 | .767 | −0.02 |
| Study 5 | Responsibility | Locomotion | 0.17 | 0.08 | 0.14 | 2.22 | .027 | 0.13 |
| $N = 273$ | | *Assessment* | 0.47 | 0.08 | 0.38 | 6.21 | <.001 | 0.35 |
| | Opportunity | *Locomotion* | 0.48 | 0.10 | 0.32 | 5.02 | <.001 | 0.29 |
| | | Assessment | 0.13 | 0.09 | 0.09 | 1.34 | .180 | 0.08 |
| Study 6 | Responsibility | Locomotion | 0.11 | 0.10 | 0.08 | 1.09 | .276 | 0.08 |
| $N = 171$ | | *Assessment* | 0.47 | 0.10 | 0.34 | 4.69 | <.001 | 0.34 |
| | Opportunity | *Locomotion* | 0.34 | 0.08 | 0.30 | 4.07 | <.001 | 0.30 |
| | | Assessment | 0.17 | 0.09 | 0.15 | 2.05 | .042 | 0.16 |
| Study 7 | Responsibility | Locomotion | −0.03 | 0.12 | −0.02 | −0.23 | .816 | −0.02 |
| $N = 144$ | | *Assessment* | 0.11 | 0.11 | 0.09 | 1.06 | .289 | 0.09 |
| | Opportunity | *Locomotion* | 0.41 | 0.12 | 0.28 | 3.47 | .001 | 0.28 |
| | | Assessment | 0.18 | 0.11 | 0.14 | 1.75 | .082 | 0.15 |

*Note*. $r$ = effect size (correlation coefficient), calculated from $t$ and $N$ via https://campbellcollaboration.org/escalc/html/EffectSizeCalculator-R6.php.

bringing goals forward *together* (at least as long as collaboration partners are needed for goal attainment; for related findings see Orehek et al., 2014).

As a major strength of the present work, we tested the predicted relations with a large sample set across different instances and/or scenarios of collaboration, ranging from "team plays" and "distributions games" to work contexts and people's general way to approach situations. Notwithstanding, a clear limitation here is that due to the correlational nature of the data, we cannot draw conclusions about the direction or causality of the patterns we report. As the main findings and the exploratory reverse analyses reported in the Supplement suggest (correlationally), both directions may be plausible; self-regulatory mode may predict which construal of a collaboration becomes more likely in a given situation (as examined here), but also, a construal of a collaboration may make it more likely that people adopt a specific self-regulatory mode in a given situation. This should be tested in future research.

In addition, the internal consistency of the locomotion mode measures was not satisfying in all studies. In particular in Studies 1, 2 and 4, where we used brief scales instead of the original 12 item scale, the internal consistency was relatively low (see Table 2), which means that the results here need to be treated with some caution (e.g., Salkind, 2010). The predicted relation between assessment and opportunity was descriptively smaller than in the other studies (see Fig. 1). Thus, the low internal consistency might contribute to an underestimation of the effect size in this case. The differences between the studies are, however, very small. Therefore, we assume that the low internal consistency did not substantially affect the overall results, especially not in case of the meta-analysis.

The findings are relevant for research on perceived responsibility and opportunity in social situations. Prior work here so far mostly focused on contexts with specific *social roles* (i.e., high power) and conditions under which people (power holders) likely perceive responsibility for others. This work focused on (a) *situational* factors (e.g., leader election; attention to others vs. the self, social identification; or expected type of contact; De Cremer & van Dijk, 2008; Scholl et al., 2017; Scholl, Sassenberg, et al., 2018) in predicting the level of perceived responsibility; with regard to individual differences, it also examined (b) the role of people's general *concern* for others (e.g., relationship orientation; Chen et al., 2001; prosocial orientation; Côté et al., 2011). Going beyond these, we here show that the way how people *self-regulate* their behavior plays a role in understanding their perceived responsibility (and opportunity as well).

Notably, based on this prior work, we here focused on people's perception (construal) of collaboration in terms of responsibilities or opportunities. Though we consider this an important distinction, these two aspects are likely not the only aspects a person can focus on when anticipating or engaging in a collaboration with others. Moreover, people may focus on different aspects that a collaboration brings (e.g., potential costs or benefits). It would be interesting to examine which aspects play a role beyond the ones we studied here, how these may feed into the perception of responsibilities and/or opportunities, and even whether they are connected to other states of self-regulation (e.g., regulatory focus; Higgins, 1997).[1]

What do the findings imply in larger sense—for instance, with regard to the implications of regulatory mode and the perception of a collaboration? Prior work on responsibility and opportunity with regard to social roles demonstrated that this perception alters how people feel and behave towards others; for instance, when people (power holders) are made aware of their responsibility (as compared to their opportunity), they are more willing to collaborate with others in the sense of valuing and integrating their advice or sharing resources (De Wit et al., 2017; Scheepers et al., 2020). Such outcomes likely contribute to a collaboration—here, potentially for assessors (and also locomoters) who perceive responsibility. Yet, perceiving or being aware of responsibilities also increases experienced stress (i.e., likely the perceived demands to fulfill); especially the latter finding is in line with evidence

[1] We thank an anonymous reviewer for this suggestion.

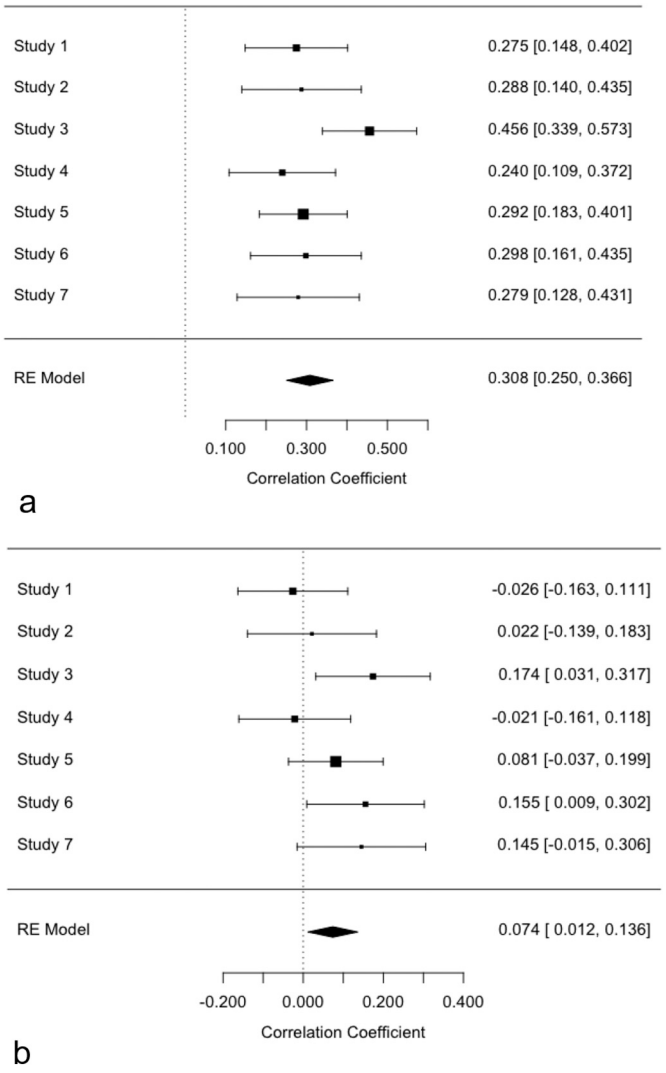


**Fig. 1.** a. Meta-analytical results (*r*, [95% CI]) for locomotion contributing to opportunity (controlled for assessment; Hypothesis 2).
b. Additional meta-analytical results (*r*, [95% CI]) for assessment contributing to opportunity (controlled for locomotion).

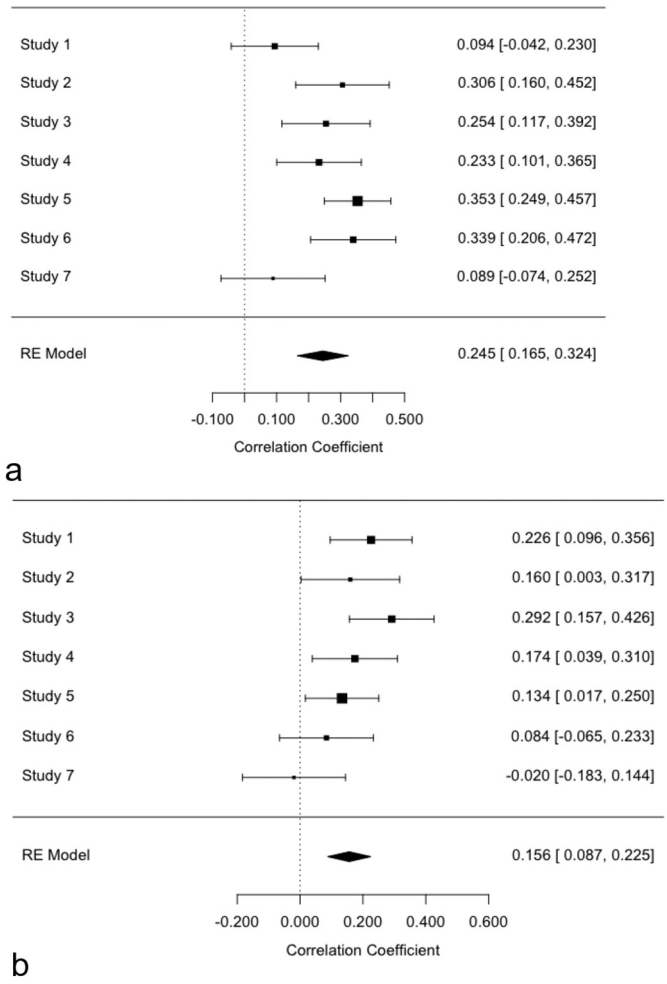


**Fig. 2.** a. Meta-analytical results (*r*, [95% CI]) for assessment contributing to responsibility (controlled for locomotion).
b. Additional results (*r*, [95% CI]) for locomotion contributing to responsibility (controlled for assessment).

showing that an assessment mode is positively (and a locomotion mode negatively) related to burnout (i.e., stress) at work (De Carlo et al., 2014; for related work see also Chen et al., 2018; Hong et al., 2004; Vazeou-Nieuwenhuis et al., 2017). This suggests that findings from prior work on responsibility and opportunity in the context of power may also transfer to other social situations; yet, future research needs to examine this more directly.

From a practical point of view, the findings suggest that understanding how a person typically regulates his or her behavior (striving to "move on" in terms of locomotion, and/or to "do things right" in terms of assessment) contributes to how s/he likely perceives collaborations. For instance, employers at work may use an employee's regulatory mode to anticipate whether said employee will likely perceive joint tasks as an opportunity or rather as a responsibility; this may help to get a clearer picture on what to expect from each person, which can also be helpful for job recruiters in bringing together people for joint projects with a clear focus on opportunities or responsibilities. From the present findings, we can conclude that regulatory mode is linked to the way how people perceive and possibly approach collaborations at work—but, we cannot make predictions about specific behavior during a collaboration.

Accordingly, for future work, it would be interesting to examine if perceived responsibility contributes to better collaboration (e.g., among employees); for instance, it may well be that people perceiving more responsibility are more committed in fulfilling their own tasks and duties, which could diminish motivation losses in collaborative contexts. Conversely, it might be that perceiving opportunities and freedom enhances people's flexibility and generation of creative ideas in a collaboration. As such, an important follow-up question would be to examine the possibility that, if both perceptions are (highly) present in the same individual, being able to flexibly switch between the two perceptions as opportunity/responsibility may be particularly helpful for team play and leadership.

## 5. Conclusion

Coming back to the opening example, the expectation to collaborate with others (e.g. as a student in class, but potentially also as an employee or leader at work) can be perceived as responsibility and/or opportunity; this perception depends (potentially among other factors) on the way how people generally regulate their behavior, being in an assessment or locomotion mode. Striving towards "just doing it" (as locomoters) makes a perception of collaborations as an opportunity to "make things happen" (and responsibility) more likely; whereas striving towards "doing things the right way" (as assessor) make a perception as responsibility to "take care of things" more likely.

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## CRediT authorship contribution statement

**Annika Scholl:** Conceptualization, Formal analysis, Writing – original draft. **Michael Wenzler:** Methodology, Investigation, Formal analysis, Writing – review & editing. **Naomi Ellemers:** Conceptualization, Writing – review & editing. **Daan Scheepers:** Conceptualization, Writing – review & editing. **Kai Sassenberg:** Conceptualization, Validation, Writing – review & editing.

## Declaration of competing interest

None.

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