



## Two motivations for two dimensions of mind

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### HIGHLIGHTS

- Four studies examine how different motivations affect focus on outgroups' minds.
- Affiliation versus effectance drives focus on agency versus experience.
- These motivations also drive attribution of moral rights and responsibilities.
- These motivations drive preferential focus on trustworthiness versus dominance.

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### ABSTRACT

Effective social interaction requires people to consider the minds of others. The present research suggests that different motivations systematically elicit attention to different components of mind. Four experiments manipulate either motivation for action prediction (effectance motivation) or motivation for affiliation and ask participants to evaluate the minds of outgroups. Experiments 1–2 feature hypothetical outgroups, while Experiment 3 targets Americans' relationship with China and also demonstrates consequences for moral judgment. Experiment 4 targets Americans' relationship with Iran and demonstrates consequences for moral and dispositional attribution toward groups. The findings reveal that effectance motivation relative to affiliation motivation triggers preferential focus toward *agency* (i.e., capacities for planning, thinking, intending), relative to *experience* (i.e., capacities for emotion and feeling). These results show that group mind judgments are determined not just by the features of the group but also by the motivations of the perceiver.

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### Introduction

As social animals, humans constantly must determine whether potential interaction partners are friendly or threatening (Fiske, Cuddy, & Glick, 2007). We seek affiliation with friends, whereas we monitor and anticipate the actions of our enemies. The motivation for affiliation and the motivation for action prediction and understanding (i.e., effectance motivation; White, 1959) are major determinants of mind attribution, the attribution of another entity's mental states, including emotion, intention, and thought (Waytz, Gray, Epley, & Wegner, 2010).

The need for affiliation drives mind attribution because understanding others' minds facilitates coordination, cooperation, and communication (Baron-Cohen, 1995; Epley, Akalis, Waytz, & Cacioppo, 2008; Epley & Waytz, 2010; Humphrey, 1976; Tomasello, Carpenter, Call, Behne, & Moll, 2005). Interpersonal liking correlates with mind attribution (Kozak, Marsh, & Wegner, 2006), and people attribute particular mental

states preferentially to ingroup members versus outgroup members (Harris & Fiske, 2006; Leyens et al., 2000).

Likewise, effectance motivation also requires a robust understanding of minds. Numerous studies have demonstrated that motivation to attain mastery increases mind attribution—when people are motivated to gain control and predictability, they often do so by anthropomorphizing God or seeing human agents as especially mentalistic (Gray & Wegner, 2010; Kay, Moscovitch, & Laurin, 2010; Morewedge, 2009; Waytz et al., 2010).

Although affiliation and effectance alike have been established as major determinants of mind attribution, the present research examines whether these motivations differentially affect people's preferential focus on different dimensions of mind. Prior work shows that people represent mind in terms of both *agency* (i.e., planning, intention) and *experience* (i.e., emotion, feeling), and these perceptions are tied to the attribution of moral responsibilities and rights, respectively (Gray, Gray, & Wegner, 2007; Gray & Wegner, 2009). We examine people's preferential focus on these dimensions (i.e., their prioritization of these dimensions) rather than their attribution of mind for two primary reasons. The first is simply that existing work has not examined preferential focus, creating a gap in the literature we wish to fill. Second,

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existing work shows that attributions of agency and experience are highly intercorrelated and are affected similarly by affiliation and effectance (Epley et al., 2008; Kozak et al., 2006; Waytz et al., 2010; Waytz, Morewedge, et al., 2010); yet we expect different motivations to yield more separable effects in terms of preferential focus on different dimensions of mind.

Specifically, we test the hypothesis that affiliation motivation and effectance motivation differentially lead people to focus on experience and agency, respectively. Attending to another entity's emotions and feelings, critical components of *experience*, may support cooperation and connection in the service of social affiliation (Schutte et al., 2001). By contrast, establishing plans, forming intentions, and setting goals represent critical components of *agency*—and these are precisely the capacities on which one would focus if motivated to predict action.

Four experiments explore the links between effectance and affiliation motivations and agency and experience in evaluations of *outgroups*. Outgroups serve as an ideal and important target as they can elicit both motivational aims—in some circumstances, people seek an allegiance with an outgroup through pacts or treaties, whereas in other contexts people must strategically monitor and predict the actions (i.e., attacks) of an outgroup directed toward the ingroup. Although previous research suggests that people typically fail to consider the minds of outgroups (Goff, Eberhardt, Williams, & Jackson, 2008; Harris & Fiske, 2006; Leyens et al., 2000; Struch & Schwartz, 1998), the present research attempts to demonstrate conditions under which consideration of outgroups' mental states occurs. Experiments 1–2 test the basic hypothesis that effectance and affiliative motivations increase preferential focus on agency versus experience, respectively. Experiment 3 explores how these patterns of focus influence attributions of moral responsibilities and rights, and Experiment 4 examines how these patterns influence attributions of dominance and trustworthiness.

## Experiment 1

Experiment 1 tests the hypothesis that effectance elicits preferential focus on agency, whereas affiliation elicits preferential focus on experience.

### Method

#### Participants

Seventy-seven U.S. residents (32 female, 1 unreported,  $M_{\text{age}} = 29.66$ ) completed the study online via Amazon Mechanical Turk (MTurk).<sup>2</sup>

#### Procedure

Participants answered questions about an enemy country, after being randomly assigned to one of two conditions designed to elicit motivation for *effectance* or *affiliation*.

#### Effectance vs. affiliation manipulation

The manipulation was as follows with differences between conditions in bold:

We would like you to imagine that you are part of a government agency tasked with **making accurate predictions about what this country will do next (establishing affiliation with this enemy country)**. That is, imagine your task is to establish **the ability to predict and understand the actions of the country, for strategic purposes (a positive social connection with the country, to establish an allegiance)**. Below are a number of capacities that the

country may or may not possess. For each capacity, rate how important it is for you to consider these capacities in order to achieve your goal of **making accurate predictions about what the country will do next (forming a positive social connection with the country)**. You will do this by ranking these capacities for MOST relevant to achieving your goal of **action prediction (affiliation)** to LEAST relevant to achieving your goal of **action prediction (affiliation)**.

In both conditions, participants ranked six mental states of that country most important to achieving their goal (1 = *most important*, 6 = *least important*): three pertained to agency (*doing things on purpose, goals, and planned actions*), and three pertained to experience (*emotion, feelings, and experiencing pain and pleasure*) (order randomized). Averaging the rank of the three agency items and the three experience items produced *agency* and *experience* composites. We predicted that participants would rank agency as more important in the effectance condition and experience as more important in the affiliation condition.

### Results and discussion

A 2 (motivation: effectance vs. affiliation)  $\times$  2 (mind dimension: agency vs. experience) ANOVA revealed a main effect of mind dimension,  $F(1, 75) = 64.83, p < .0001, \eta_p^2 = .46$ . Both conditions judged agency ( $M = 2.71, SD = 0.91$ ) to be more relevant than experience ( $M = 4.29, SD = 0.91$ ) (lower numbers reflect greater importance), broadly consistent with work showing that people see groups as possessing more agency than experience (Knobe & Prinz, 2008).

More important for our hypothesis, a motivation  $\times$  mind dimension interaction emerged,  $F(1, 75) = 9.41, p < .01, \eta_p^2 = .11$  (a nonparametric analysis revealed the same result<sup>3</sup>). Participants judged agency to be more important for effectance versus affiliation and experience to be more important for affiliation than effectance ( $ts(75) = 3.07, ps = .003, ds = .71$ ) (see Table 1 for all descriptive statistics). These results suggest people do not consider both dimensions of mind equally across contexts. Instead, people preferentially focus on *agency* more so when motivated to predict an enemy's behavior, whereas affiliation motives comparatively shift people's focus toward *experience*.

## Experiment 2

Experiment 1 demonstrates that effectance motivation versus affiliation motivation increases preferential focus on information about agency versus experience. Experiment 2 replicates this finding in a different context, showing once again that effectance motivation comparatively increases considerations of agency in outgroups, whereas affiliation motivation comparatively increases considerations of experience in outgroups.

### Method

#### Participants

Two hundred twenty-four U.S. residents (95 female, 6 unreported,  $M_{\text{age}} = 32.31$ ) completed the study as in Experiment 1.

#### Procedure

Experiment 1 was identical to Experiment 2 with the following exception: participants in both the effectance and affiliation conditions

<sup>3</sup> Although Freedman's test can compare ranks of two types of items from multiple individuals, it cannot test for the interaction between mind dimension and condition. We therefore rely on a new rank-based nonparametric method (Wu, 2013) that estimates the probability of a randomly chosen participant from each condition (effectance vs. affiliation) to rate a randomly chosen component of agency as more important than a component of experience. A probability greater than 0.5 indicates that, on average, participants in this condition rate a given component of agency as more important than a given component of experience. A difference in this probability across the two conditions indicates an interaction between condition and mind dimension.

<sup>2</sup> Sample size was based on previously conducted studies of a similar nature, and increased in subsequent experiments to ensure proper power. Looking at results did not influence collection of additional data in these studies.

**Table 1**  
Average rank responses by condition, Experiment 1.

| Dimension of mind | Effectance<br><i>M</i> ( <i>SD</i> ) | Affiliation<br><i>M</i> ( <i>SD</i> ) |
|-------------------|--------------------------------------|---------------------------------------|
| Agency            | 2.40 (0.61)                          | 3.01 (1.06)                           |
| Experience        | 4.60 (0.61)                          | 3.99 (1.06)                           |

were told they could allocate \$100 million (in 100 units) to different task forces for assessing various capacities of the enemy country.

#### Effectance vs. affiliation manipulation

The manipulation was as follows (differences between condition are in bold):

We would like you to imagine that you are part of a government agency tasked with **making accurate predictions about what this country will do next (establishing affiliation with this enemy country)**. That is, imagine your task is to establish **the ability to predict and understand the actions of the country, for strategic purposes (a positive social connection with the country, to establish an allegiance)**. Below we want you to answer questions about a number of mental states that the country may or may not possess. Imagine you have \$100 million dollars to divide up to different task forces to assess the country's capacity for each of these mental states. For each capacity, think about how important it is for you to consider these capacities in order to achieve your goal of **predicting and understanding the actions of this country (forming a positive social connection with the country)**. Allocate the 100 units (listed below in millions) in any way you would like to best achieve your goal of **predicting and understanding the country's next actions (forming a positive social connection with the country)**.

Participants were then asked to divide up the 100 units to task forces devoted to obtaining information about four mental state capacities: two captured *agency* ('task force to determine country's capacity for doing things on purpose' and 'task force to determine country's capacity for planned actions'), and two captured *experience* ('task force to determine country's capacity for emotion' and 'task force to determine country's capacity for feelings'). We summed the two items for agency and experience separately as allocation scores for each dimension of mind.

#### Results and discussion

A 2 (motivation: effectance vs. affiliation)  $\times$  2 (mind dimension: agency vs. experience) ANOVA revealed a main effect of mind dimension,  $F(1, 222) = 111.01, p < .0001, \eta_p^2 = .33$ . Similar to Experiment 1, participants in both conditions allocated more resources to agency ( $M = 62.49, SD = 18.04$ ) than to experience ( $M = 37.51, SD = 18.04$ ). However, critical for our hypothesis, and replicating and extending Experiment 1, a motivation  $\times$  mind dimension interaction emerged,  $F(1, 222) = 6.50, p = .011, \eta_p^2 = .03$ . Participants judged agency to be more important for effectance versus affiliation and experience to be more important for affiliation versus effectance ( $t_s(222) = 2.55, ps = .011, ds = .34$ ) (see Table 2 for all descriptive statistics). Thus, Experiment 2 provides a second demonstration that effectance motivation comparatively shifts people's focus to an outgroup's agency, whereas motivation for affiliation shifts people's attention to an outgroup's experience.

#### Experiment 3

Experiment 3 extends the findings of Experiments 1–2 to the context of actual intergroup relations: the United States' relationship

**Table 2**  
Average allocation responses by condition, Experiment 2.

| Dimension of mind | Effectance<br><i>M</i> ( <i>SD</i> ) | Affiliation<br><i>M</i> ( <i>SD</i> ) |
|-------------------|--------------------------------------|---------------------------------------|
| Agency            | 65.58 (18.90)                        | 59.51 (16.71)                         |
| Experience        | 34.42 (18.90)                        | 40.49 (16.71)                         |

with China. This study also assesses whether affiliation and effectance motivations similarly affect people's attributions of moral responsibility and moral rights.

#### Method

##### Participants

Three hundred and six U.S. residents (104 female, 3 unreported,  $M_{age} = 28.70$ ) completed the study as in Experiments 1–2.

##### Procedure

Participants read that they would answer questions about "China, a country that currently has a tense relationship with the United States."

#### Effectance vs. affiliation manipulation

They were then randomly assigned to one of two conditions to manipulate motivation for *effectance* or *affiliation* toward China as in the previous studies (differences between condition are in bold):

We would like you to imagine that you are part of a government agency tasked with **making accurate predictions about what China will do next (establishing affiliation with China)**. That is, imagine your task is to establish **the ability to predict and understand China's actions, for strategic purposes (a positive social connection with China, to establish an allegiance)**. Below we want you to answer a question about mental states that China may or may not possess. One category of mental states is called EXPERIENCE: this category includes the capacity to feel, to have emotions, and to experience pain and pleasure. Another category of mental states is called AGENCY: this category includes the capacity to think, make plans, and have intentions. Imagine you have \$100 million dollars to divide up to different task forces to assess China's capacity for these mental states. Using the item below, indicate whether it is more important to focus on task forces to assess China's capacity for EXPERIENCE or China's capacity for AGENCY. When answering this question, think about how important it is for you to consider these capacities in order to achieve your goal of **predicting and understanding China's next actions (forming a positive social connection with China)**. For example, if you think it is more important to focus on China's AGENCY (their capacity for intention, planning, thought) **to predict and understand them (to affiliate with them)**, select a 1 or 2. If you think it is more important to focus on China's EXPERIENCE (their capacity for feeling, emotion, and pain/pleasure) **to predict and understand them (to affiliate with them)**, select a 6 or 7. If you feel somewhere in between, select a 3, 4, or 5.

Participants then completed a *mind measure* assessing focus on agency versus experience, on a 7-point scale with the following anchors: 1 = *More important to focus on China's capacity for AGENCY (intention, planning thought)*; 4 = *Important to focus equally on AGENCY and EXPERIENCE*; and 7 = *More important to focus on China's capacity for EXPERIENCE (feelings, emotion, pain/pleasure)*.

Next, participants were asked "to imagine a conflict emerges between the two countries, which involves a trade war that harms citizens of both countries and produces increased military threats from both sides." All participants then answered four questions related

to morality on a 7-point scale (1 = *not at all*, 7 = *very much*), two of which pertained to moral responsibility (“How much do you think China should be punished for its actions in this circumstance?” and “How much do you think China should be blamed for its actions in this circumstance?”) and two of which pertained to moral rights (“How much do you think China deserves moral care and concern in this circumstance?” and “How much do you think China is a victim in this circumstance?”). We averaged each of the two moral responsibility items ( $r(304) = .63, p < .0001$ ) and moral rights items ( $r(304) = .39, p < .0001$ ) to create a composite for each construct.

### Results and discussion

One-sample *t*-tests for both conditions separately comparing mind measure scores to the scale midpoint (4, indicating an equal focus on agency and experience) revealed that effectance participants significantly differed from the midpoint,  $t(151) = 6.72, p < .0001, d = .54$ , whereas affiliation participants did not ( $p = .45$ ). We then compared this mind measure across conditions, and, as predicted, participants in the effectance condition focused more on agency ( $M = 3.06, SD = 1.73$ ), but participants in the affiliation shifted toward experience ( $M = 3.89, SD = 1.82$ ),  $t(304) = 4.10, p < .0001, d = .47$ . Again, participants in both conditions focused more on agency than experience (given that both scores were below the scale midpoint), but importantly participants in the affiliation condition focused more on experience.

A 2 (condition: effectance vs. affiliation)  $\times$  2 (moral dimension: responsibility vs. rights) ANOVA revealed no main effect for condition ( $p = .23$ ) and a significant main effect of moral dimension: participants rated moral responsibility ( $M = 4.30, SD = 1.17$ ) higher than moral rights ( $M = 3.74, SD = 1.20$ ),  $F(1, 304) = 30.68, p < .0001, \eta_p^2 = .09$ . Specifically, participants in the effectance condition as well as the affiliation condition rated China higher on moral responsibility than rights ( $t_s = 2.00, p_s < .05, d_s \geq .53$ ). More important, the predicted interaction emerged,  $F(1, 304) = 7.69, p = .006, \eta_p^2 = .03$ , such that participants in the affiliation condition rated China higher on moral rights than participants in the effectance condition,  $t(304) = 2.88, p = .004, d = .33$ , whereas participants in the effectance condition trended toward rating China higher on moral responsibility than participants in the affiliation condition ( $p = .19$ ) (see Table 3 for all descriptive statistics). Interestingly, the mind measure did not correlate significantly with moral dimensions or with the difference between these dimensions (all  $p_s > .12$ ). This lack of significant correlation suggests that whereas *attributions* of agency and experience maps on to moral rights and responsibilities, respectively, *preferential focus* on agency versus experience, measured here, may not. Instead, focus on agency/experience and attribution of moral rights/responsibility may represent distinct processes—and motivational context affects both. These results demonstrate that affiliation and effectance motivations compel not only differential foci on experience and agency, respectively, but also differential attributions of moral rights and responsibility.

### Experiment 4

Experiment 4 builds upon Experiments 1–3 by asking American participants to evaluate Iran and by introducing three methodological changes. First, we measured perceptions of agency and experience separately to assess the unique effect of motivation on each dimension

**Table 3**  
Average responses on moral dimensions by condition, Experiment 3.

| Moral dimension | Effectance<br><i>M</i> ( <i>SD</i> ) | Affiliation<br><i>M</i> ( <i>SD</i> ) |
|-----------------|--------------------------------------|---------------------------------------|
| Responsibility  | 4.39 (1.11)                          | 4.21 (1.23)                           |
| Rights          | 3.54 (1.20)                          | 3.93 (1.16)                           |

of mind. These measures allow us to examine perception explicitly and also allow us to create a difference score for perception of these two dimensions to measure preferential focus. Second, we used measures of affiliation motivation and effectance motivation to validate our manipulation and its effects on preferential focus on dimensions of mind. Third, we examined dispositional attributions that should follow from attributions of mind—the two essential dimensions of person perception, warmth and competence (Fiske et al., 2007), and the related traits of trustworthiness and dominance that reflect judgments of approach-avoidance and power over others, respectively (Oosterhof & Todorov, 2008). We expected that effectance versus affiliation would increase preferential focus on agency versus effectance, respectively, leading to differential increases in attributions of competence versus warmth and dominance versus trustworthiness, respectively.

### Method

#### Participants

Two hundred ninety-six U.S. residents (108 female,  $M_{age} = 31.04$ ) completed the study as in Experiments 1–3.

#### Procedure

Participants read that they would answer questions about “tension between the U.S. and Iran” and were randomly assigned to one of two conditions to manipulate motivation for *effectance* or *affiliation* toward Iran.

#### Effectance vs. affiliation manipulation

We asked participants to generate five suggestions in five boxes for how the U.S. could attain effectance or affiliation with Iran and stated we would pay a bonus via MTurk for feasible and effective solutions. We included this incentive to ensure that participants were taking the task seriously and also excluded from analysis below 78 people (44 in the affiliation condition, 34 in the effectance condition,  $p = .24$ ) who did not complete the manipulation in full (e.g., giving only one suggestion instead of five) for this reason (however, including these people did not meaningfully alter results). The manipulation was as follows (differences between conditions are in bold):

In the following section, we would like you to think about the country of Iran. Given the current tension between the U.S. and Iran, during the coming years, it will be increasingly important **for the U.S. and Iran to think about how to outsmart each other, how to anticipate the other country's actions, how to predict what the other country will do next, and how to essentially have mastery and control over the other country (for the two countries to think about how to find common ground, how to find unity, and how to find affiliation with each other)**. Below we want to elicit suggestions from you on how the United States can **strategically predict and anticipate Iran's actions, to attain mastery and control over them in competition (effectively affiliate and coordinate with Iran, to reach some level of cooperation)**. We will evaluate everyone's responses and give at least 3 bonuses of \$5.00 apiece (distributed via MTURK) to individuals who have produced what we feel are most feasible and effective responses.

#### Effectance and affiliation measures

To examine the validity of our manipulations, we then asked all participants questions on a 7-point scale (1 = *not at all*, 7 = *very much*) pertaining to affiliation (“How important is it for you personally to attain affiliation with Iran?”) and effectance (“How important is it for you personally to attain mastery and control over Iran?”).

Participants then answered questions pertaining to agency and experience, warmth and competence (Fiske et al., 2007), and

trustworthiness and dominance (Oosterhof & Todorov, 2008). We created composites for multi-item measures for agency, experience, warmth, and competence by averaging items (all  $\alpha$ s > .76). All items were asked on a 7-point scale (1 = *not at all*, 7 = *very much*), “Compared to the average person ...?” followed by various capacities.

#### Agency and experience measures

To assess mind attribution, participants answered questions pertaining to capacities for agency (to what extent is Iran ... capable of having intentions, capable of doing things on purpose, capable of planning) and for experience (to what extent is Iran ... capable of having emotions, capable of feeling, capable of experiencing pain and pleasure),

#### Warmth and competence measures

To assess fundamental dimensions of person perception, participants answered questions pertaining to traits reflective of warmth (how warm, friendly, good-natured ... is Iran) and traits reflective of competence (how competent, intelligent, confident ... is Iran).

#### Trustworthiness and dominance measures

Participants also answered single items for trustworthiness (how trustworthy is Iran) and dominance (how dominant is Iran).

#### Results and discussion

Independent t-tests were performed on all measures (See Table 4 for all descriptive statistics). In terms of motivation, self-reported effectance and affiliation differed significantly between effectance and affiliation conditions as expected, suggesting that our manipulations were effective,  $t$ s > 2.76,  $p$ s ≤ .01,  $d$ s > .37.

In terms of dimensions of mind, experience differed between the effectance and affiliation conditions,  $t(216) = 1.96$ ,  $p = .051$ ,  $d = .27$ , but agency did not ( $p = .65$ ). These findings suggest that the preferential focus on agency versus experience that emerges in Experiments 1–3 might be driven by experience, which again is consistent with people's natural willingness to see agency rather than experience in groups (Knobe & Prinz, 2008).

Warmth and trustworthiness also differed significantly across effectance and affiliation conditions ( $t(216) = 2.81$ ,  $p = .005$ ,  $d = .38$ ;  $t(216) = 3.39$ ,  $p = .001$ ,  $d = .46$ ). Competence trended toward differing across condition,  $t(216) = 1.56$ ,  $p = .12$ ,  $d = .21$  ( $p = .004$  including 75 who did not complete manipulation in full), and dominance did not differ significantly ( $p = .85$ ). These findings reveal a similar pattern to the dimensions of mind given that we expected experience to track with warmth and trustworthiness and agency to track with competence and dominance.

Next we assessed our overarching research question—whether differential motivation for effectance versus affiliation affected preferential focus on agency versus experience—and whether this difference

in focus influences differential focus on competence versus warmth and trustworthiness versus dominance. To examine these questions, we calculated difference scores for effectance minus affiliation, agency minus experience, competence minus warmth, and dominance minus trust. All difference scores differed significantly across conditions ( $t$ s > 2.38,  $p$ s < .02,  $d$ s > .32), except, unexpectedly, the competence-warmth score ( $p = .21$ ), so we exclude this difference score from further discussion. The effectance condition versus the affiliation condition produced greater motivation for effectance over affiliation, preferential focus on agency over experience, and preferential focus on dominance versus trustworthiness. Most important, and consistent with our overall hypothesis, condition produced an effectance-affiliation motivational difference that mediated the effect of condition on agency-versus-experience consideration (bootstrapping analysis, Preacher & Hayes, 2008; conditions coded 1 and 0; 20,000 resamples; 95% CI =  $-.45$  to  $-.16$ ). In addition, a comparable mediation analysis revealed that agency-versus-experience mediated the effect of condition on perceptions of dominance-versus-trustworthiness (20,000 resamples; 95% CI =  $-.42$  to  $-.07$ ). These findings reveal another consequence of preferential focus on agency versus experience—heightening affiliation versus effectance increases focus on experience versus agency, which in turn alters focus on Iran as a country that is relatively more trustworthy than imposing.

#### General discussion

Four experiments reveal that effectance motivation compared to affiliation motivation increases people's preferential focus on agency versus experience, and affects perceptions of outgroups' moral characteristics as well as judgments of trustworthiness and dominance. The implications of these studies are twofold. First, these studies distinguish between different kinds of motivational effects in the context of intergroup evaluation. Although prior work has shown that effectance motivation and motivation for affiliation predict mind perception and attribution (Epley, Waytz, & Cacioppo, 2007; Waytz et al., 2010; Waytz, Morewedge, et al., 2010), no research has systematically characterized the differential contributions of these motivations to a preferential focus on one of these two dimensions. The contribution of the current studies is to show that the desire for social connection may focus people on the experiential components of mind (as well as the agentic components of mind) for social connection, whereas the motivation to anticipate and monitor others' harmful actions prompts a primary focus on agency.

A second, related contribution of the present research is the demonstration of conditions under which people consider different dimensions of mind to groups. Previous research has suggested that people primarily attribute agency—not experience—to groups (Knobe & Prinz, 2008); for example, Google may *plan* to take over Apple, but Google does not *feel sad* about the failure of its recent project. Like this prior work, the present studies also demonstrate broadly a preferential focus on agency versus experience for groups. However, our findings also offer an important amendment to this prior account: people may be more willing to consider the experience of a group when motivated to affiliate with the group. These findings are consistent with prior work showing that people do in fact attribute complex emotions such as nostalgia and humiliation to their own groups (i.e., ingroups; Leyens et al., 2000).

We end our discussion on a note of optimism, to suggest our findings as distinct from previous work on intergroup perceptions. Extensive research has shown that people consider their own group to be superior to outgroups (Brewer & Kramer, 1985; Correll & Park, 2005; Turner, Brown, & Tajfel, 1979), and tend to dehumanize outgroups (Goff et al., 2008; Harris & Fiske, 2006; Leyens et al., 2000; Struch & Schwartz, 1998). During the Rape of Nanking, Japan's brutal 1937 invasion of China, a Japanese general reported that it was easy for his soldiers to kill Chinese civilians “because we thought of them as *things*, not people

**Table 4**  
Average responses on all measures by condition, Experiment 4.

| Measure         | Effectance<br>M (SD) | Affiliation<br>M (SD) |
|-----------------|----------------------|-----------------------|
| Effectance      | 2.93 (1.93)          | 2.28 (1.47)           |
| Affiliation     | 2.63 (1.62)          | 3.47 (1.69)           |
| Experience      | 4.22 (1.55)          | 4.63 (1.52)           |
| Agency          | 5.38 (1.21)          | 5.31 (1.27)           |
| Warmth          | 2.94 (1.24)          | 3.42 (1.27)           |
| Competence      | 4.46 (1.15)          | 4.70 (1.06)           |
| Trustworthiness | 2.58 (1.35)          | 3.23 (1.47)           |
| Dominance       | 4.31 (1.43)          | 4.35 (1.39)           |

like us” (Zimbardo, 2007). Such dehumanization, from American soldiers' use of “gook” to describe Vietnamese civilians during wartime to the Hutus' use of “cockroach” to describe Tutsis in Rwandan warfare, often emerges during periods of intergroup conflict. On the other hand, the present research suggests that intergroup bias need not manifest in the unconditional demoralization or dehumanization of outgroups. Instead, when properly motivated by effectance, people will focus on outgroups' capacity for intentionality and purpose, and when motivated by affiliation, people will focus on outgroups' capacity to feel, emote, and experience pain and pleasure. The consideration of mind has potentially positive effects for perceptions of an outgroup's moral standing and trustworthiness and can perhaps foster more positive outcomes in intergroup conflict.

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