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**The role of the self in perspective-taking and empathy:
Ease of self-simulation as a heuristic for inferring empathic feelings**

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Abstract

When judging their empathic reactions for another person, people may rely on a relatively effortless, self-based heuristic: the ease with which they can imagine themselves in the other person's position. We present four studies showing that observers are more empathic to the extent that they can easily imagine themselves in the target's position, across a wide variety of need domains. Furthermore, we find that use of this "ease of self-simulation heuristic" (ESS), like other judgment heuristics, is conditioned by certain predictable factors: when deliberate attempts are made to take the perspective of the target person (Study 1), when the target's needs are ambiguous (Study 2), and when the observer's ability to engage in more effortful perspective-taking processes are constrained by performing a cognitively-demanding second task (Study 3). In the discussion, we evaluate our findings in light of contemporary theorizing on the role of the self in perspective-taking and empathy.

Keywords: Empathy, Perspective-taking, Heuristics, Mental simulation, Self

The role of the self in perspective-taking and empathy:

Ease of self-simulation as a heuristic for inferring empathic feelings

What is the role of the self in perspective-taking and empathy? This long-standing question has been addressed over the years by a variety of social theorists. Smith (1759), Mead (1934), and Piaget (1972) have all offered analyses that emphasize connections between self-awareness, self-knowledge, and our responses to others. In recent years, social psychologists have addressed this issue in a number of empirical ways. Davis and colleagues (Davis, Conklin, Luce, & Smith, 1996) found evidence that deliberate perspective-taking led observers to attribute more self-related and primarily positive traits to targets—a “merging” of self and others. They argued that perspective-taking activates self-knowledge, and the greater accessibility of such information then leads it to be used in characterizing others. In support of this interpretation, Davis et al. (2004) used a thought-listing procedure and found that perspective-taking observers reported more self-related thoughts.

Epley and colleagues (Epley, Keysar, Van Boven, & Gilovich, 2004) implicate the self in perspective-taking via an “anchoring and adjustment” heuristic. That is, people infer others’ perspectives by starting from their own point of view and then making a series of adjustments to account for likely differences between the two. However, these adjustments require time, resources, and motivation, which are often in short supply. As a consequence, the adjustment process often stops short of where it should, and people’s estimates of others’ perspectives end up looking too much like their own.

Finally, Ames (2004) proposed a similarity-contingency model which argues that attempts to infer the internal states of others will often rely on one of two relatively effortless heuristics: projection and stereotyping. Perceived similarity to the target determines which

heuristic is more likely to be used. People impute their own internal states to others who are perceived as similar (e.g., ingroup members), but employ stereotypes to infer the internal states of those who are perceived as dissimilar (e.g., outgroup members; see also Robbins & Krueger, 2005).

All of these approaches share a critical central feature: the assumption that the self is a template that observers apply to the target during perspective-taking. That is, all three approaches argue that aspects of self are in some way *projected* onto the target, and because such projection is relatively effortless, it constitutes a kind of inferential heuristic (e.g., Ames, 2004; Epley et al., 2004). However, this may not be the only role for the self. In this paper, we argue for the operation of another self-related heuristic: *ease of self-simulation*. In brief, we argue that observers often use their own imagined experiences in the target's situation as a heuristic for gauging their empathic reactions to the target, such that they will be more empathic if they can easily imagine themselves in that situation and less empathic if they cannot. We report the results of four experiments showing that observers employ this heuristic when judging their emotional and behavioral reactions to another person's misfortunes, and we further illustrate some of the important situational variables moderating the use of this heuristic.

Ease of Self-Simulation (ESS) as a Heuristic Strategy

We believe that the more easily observers can imagine themselves in the target's position, the more empathy they will feel for the target. Several lines of reasoning converge on this prediction. First, there is an extensive theoretical and empirical literature supporting the general proposition that cognitive appraisals and judgments shape subjective emotional experiences (e.g., Lazarus, 1982). Theorists may differ about the precise ways in which cognitive appraisals exert an effect (e.g., Frijda, 1986; Hoffman, 1985), but there is little doubt that they play an important

role. Second, considerable evidence specifically suggests that other-oriented "social" emotions such as sympathy and empathy are influenced by such appraisal processes. Weiner and colleagues have conducted a number of studies demonstrating that emotional reactions to a target are systematically related to attributional judgments made about the target's culpability for his or her plight; the less control the target is seen as having over the outcomes, the more sympathy observers feel (e.g., Weiner, 1980).

Third, sociological accounts suggest that sympathy and compassion result to a considerable degree from the application of cultural rules that specify which emotions are appropriate in any given situation. Thus, Clark (1997) has outlined a series of rules that are used to determine how worthy of sympathy a target will be. When observers judge the target to be especially vulnerable, for example, or particularly worthy in some way, they tend to experience greater feelings of sympathy. Fourth, and finally, research has demonstrated that judgments about the self are influenced by the perceived ease with which relevant self-information can be recalled (e.g., Caruso, 2008; Schwarz et al., 1991). For example, asking participants to recall six instances of being assertive (rather than 12) led them to make higher subsequent self-ratings of assertiveness; even though they recalled fewer instances of the behavior, the relative ease of recalling only six instances produced elevated estimates of this trait (Schwarz et al., 1991).

Thus, based on these threads of evidence, we believe that the ease with which observers can imagine themselves in the place of a target serves an important informational function. It acts as a rough signal to the observer regarding the nature of the relationship between themselves and a novel target—greater ESS signaling a stronger connection—which then shapes the observer's decision regarding the appropriate emotion. All other things being equal, easily imagining oneself in the target's situation will lead to a greater feeling of connection to the

target, resulting in greater feelings of sympathy. Why would evidence of a stronger connection between self and other lead to greater perceived feelings of sympathy? Although there are multiple possibilities, we advance one in particular. We believe that ESS may indicate a greater likelihood that the target falls within the observer's "circle of moral regard"—the set of individuals for whom the observer feels some obligation to care (Reed & Aquino, 2003). Those inside the circle are entitled to our sympathy, while those outside the circle have no such claim. Thus, the ease with which observers can imagine themselves in the target's position may provide a relatively quick and effortless means of determining whether the target is metaphorically "close enough" to merit sympathy and support.

In a way, then, ESS can be considered a specific application of the availability heuristic (Tversky & Kahneman, 1974). Extensive prior research has demonstrated that people use ease of recall when making judgments about the likelihood or frequency of an event: the more easily (or fluently) instances of an event are brought to mind, the more likely that event is judged to be (e.g., El Leithy, Brown & Robbins, 2006; Siegrist & Gutscher, 2006). We believe that a similar process operates when people make estimates of their own empathic reactions. Just as we use ease of recall to estimate the frequency of an event, we also use the ease with which we can imagine ourselves in another person's situation to estimate the degree of sympathy we should feel for that person's plight.

What is the relationship between the ESS heuristic we are describing and the more familiar process of projection that is at the heart of earlier approaches? We believe that for the most part the two constructs are distinct from one another. At one level, they would almost have to be separate phenomena, given the differing nature of "end result" of each process. That is, the earlier approaches were all concerned with how perceivers come to make some inference about

the characteristics of the target. Davis et al. (1996) were concerned with perceivers' ascription of traits to targets, Ames (2004) was concerned with ascribing thoughts, feelings, and motives to targets, and Epley et al. (2004) were concerned with perceiver's estimates of others' cognitive judgments in a variety of contexts.

In contrast, the ESS heuristic is concerned not with inferences about the target but with the empathic response of the perceivers themselves. As a result, the projective process on which the earlier approaches were based—in which specific traits, thoughts, and feelings of the perceiver are ascribed to the target—have no place. Unlike other approaches, then, the end result of ESS heuristic is not a judgment about a target colored by self-information; it is a judgment about the self that is colored by how easy it is to imagine oneself in the target's position. Because the product of the ESS heuristic is an inference about the *self*, simple projection cannot account for it.

At another level, however, it might be argued that projection or something like it may still play a role in ESS judgments. If it is assumed that imagining oneself in the target's position is a kind of "holistic" projection of the perceiver's entire self into the target's circumstances, then projection can be said to play a role. This is a very broad conceptualization of projection, of course, and one that goes well beyond the use of the term by the prior approaches. Thus, projection in this broad sense might be involved during perspective-taking efforts by perceivers, while projection in the more narrow sense would not seem to be.

When Will the ESS Heuristic Operate?

Like all heuristics, ESS is likely to be used under some circumstances but not others. At least two broad considerations may influence whether or not ease of self-simulation will play a role in determining empathic responses.

Self-simulation attempts. First, use of the ESS heuristic is more likely when observers make some attempt to imagine themselves in the target's position. Our logic here is simple. When trying to imagine *another person's* perspective, *one's own* imagined experiences in the other person's situation will become more accessible or available, and consequently will be more likely to guide one's empathic reactions toward the person. While such perspective-taking attempts can occur naturally, they may also be prompted by the features of the situation. Thus, anything that leads observers to engage in perspective-taking will generally increase the use of the ESS heuristic; in contrast, anything that inhibits perspective-taking should decrease its use. In experimental contexts, the most common factor having this effect is a perspective-taking instructional set that directs the participants to imagine the target's perspective. When observers are prompted to take the target's perspective (via instructions), the ease or difficulty with which they can imagine themselves in the target's position will determine their actual empathic reactions.

More broadly, another factor increasing use of the ESS heuristic will be the presence of *ambiguity or uncertainty*. In general, when individuals have little difficulty in reaching accurate judgments there is no need for a time-saving rule of thumb. Heuristics are of most use when judgments are not obvious (e.g., Chapman & Johnson, 2002; Kruger et al., 2004; Schwarz & Vaughn, 2002). In the case of ESS, the ambiguity can take at least two forms. On one hand, observers may be uncertain about what the target is thinking and feeling. To the degree that the target's internal state is not clear, self-simulation efforts will typically increase; in cases where such target information is obvious, there is little need for such efforts. On the other hand, observers may also be uncertain regarding their own emotional responses, and in such cases self-simulation is also more likely. Thus, when the appropriate emotional response in a situation is

obvious and predictable (e.g., when faced with a highly sympathetic victim subjected to an unfair tribulation), there is little need for self-simulations.

Diminished ability or motivation. The second broad factor influencing the use of the ESS heuristic will be *observers' ability and motivation to use other, more effortful strategies*. In general, the alternative to using heuristics is to engage in more complete and effortful processing of relevant information (Smith & DeCoster, 2000). For example, the availability heuristic takes the place of a systematic search for all relevant cases; ease of recall serves as a proxy for the actual number of cases such a search would yield (Schwarz & Vaughn, 2002). In the case of observers engaging in perspective-taking, the effortful process might include a variety of complex steps: recognizing that one's own viewpoint and the target's may not be the same, suppressing one's own perspective, attending to the target's expressive cues, analyzing the target's environment, and then constructing a representation of the target's hypothesized perspective. The end result of this process may then inform the observer's attributions, judgments, and/or emotional reactions. However, taking the perspective of another in this way and seeing the world through their eyes requires sufficient time, motivation, and resources (Epley et al., 2004). When any of these are lacking, observers may simplify the task greatly by relying on the one piece of data most readily available to them: their own imagined experiences in the other's situation, and in particular how easily they can achieve this imaginative task. Thus, observers should be more likely to employ the ESS heuristic when their motivation or ability to think about the others' perspective in a more effortful, deliberate manner is limited.

Evaluating the ESS Heuristic

To evaluate these ideas, we carried out four studies. In the first, participants were exposed to a target person in need and received one of four perspective-taking instructions,

allowing us to test whether empathic reactions during deliberate perspective taking attempts depend on the ease with which one can imagine themselves in someone else's position (i.e., ESS). In the second study, we examined whether observers are more likely to use ESS when another person's situation is ambiguous by manipulating the ambiguity and severity of the target's outcomes. In the third study, we manipulated ESS by presenting participants with hypothetical need situations that were either easy or difficult to imagine happening to the self; we also manipulated cognitive load, allowing us to test whether ESS are relied upon more when one's motivation and ability to engage in more effortful forms of perspective-taking are constrained. In the fourth and final study, we distinguished between self-related thoughts and thoughts related to others (e.g., the imagined outcomes for the typical person) to show that the critical mediating variable in the simulations-empathy relationship is thoughts specifically about the self.

Study 1

If our analysis is correct, then ESS should operate more strongly when observers take the perspective of the target. One method of prompting perspective-taking is through instructional sets, and two such sets have been widely used in research on perspective-taking and empathy: *imagine-self instructions*, which explicitly ask participants to imagine how *they* would feel in the target's situation, and *imagine-target instructions*, which ask the participants to imagine how *the target* feels. Our logic clearly leads us to predict a significant association between ESS and empathy when observers have received imagine-self instructions, but what about imagine-target instructions? Such instructions do not explicitly require any self-simulation by the observer. Moreover, there is evidence that the two sets have different effects on observers' response to needy targets (Batson, Early, & Salvarani, 1997).

On the other hand, there is also evidence that both of these sets can evoke a significant amount of self-related cognition (Davis et al., 1996, 2004). And as we have argued, imagining one's own experiences often takes the place of the more deliberate, effortful strategy of imagining from the other person's unique point of view. Thus, it is possible that the imagine-target set will evoke enough self-simulation to produce a significant ESS-empathy correlation. Of course, participants not receiving either of these sets should display lower and possibly non-significant associations.

We tested these ideas in Study 1 by manipulating instructional sets. Before listening to an audiotaped interview of a student describing a problem in his or her recent life (either a chronic illness or the break-up of a long-term romantic relationship), some participants were told either to imagine how the target person was feeling about that problem or to imagine how they would feel if they were the target person (*imagine-target* and *imagine-self* conditions, respectively). Other participants were told to think about the target's situation objectively—which should inhibit perspective-taking—or were not given any special instructions (*objective* and *control* conditions, respectively). After listening to the interview, participants then indicated their empathic feelings for the target and judged how easy it was to imagine themselves experiencing the problem that the target was experiencing (i.e., ESS ratings).

To avoid confusion, it is important to make a key distinction between 1) the simple effect that perspective-taking has on empathic reactions, and 2) the effect of perspective-taking on the operation of the ESS heuristic. It is well-documented that instructing participants to imagine a target's perspective typically produces more sympathy and helping for the target (see Batson, 1991, and Davis, 1994). This effect is usually demonstrated by simply comparing the mean levels of sympathy/helping in the perspective-taking and control conditions. The ESS heuristic

refers to something else entirely—the *correlation* between ESS ratings and empathic reactions. Thus, independent of any effect that perspective-taking instructions may have on mean empathy levels, we argue that such instructions will also increase reliance on the ESS heuristic. When observers are prompted to take the target's perspective, the ease with which they can imagine themselves in the target's position (i.e., ESS ratings) should be strongly related to their empathic reactions. When they have *not* made such explicit perspective-taking attempts, their ESS ratings will be more weakly related to such reactions. Therefore, we predicted a stronger relationship between ease of self-simulations and empathy in the imagine-target and imagine-self conditions than in the objective and control conditions (i.e., perspective-taking condition will interact with ESS ratings to predict empathy).

Method

Participants. University of Florida students (52 males, 129 females) enrolled in an introductory psychology course received credit towards a research exposure requirement for participating.

Procedure. Upon arrival at the laboratory, participants were informed that they would hear a recording of someone describing a significant problem in his or her recent life and then make judgments about that person's needs and emotional states. The experimenter explained that all aspects of the study would take place on a personal computer, escorted participants to individual computer terminals, and outfitted them with a pair of headphones.

After filling out some preliminary demographic information (including gender, which was used to match participants to a same-gender target person), a screen informed participants that they would be listening to a short segment of an audiotaped interview between a therapist and client conducted at the university mental health services office. The client was said to be a

student seeking psychological counseling for a recent problem that had been interfering with his or her daily functioning. By random assignment, some participants learned that the student had a recent bout with health problems (health condition), while others learned that the student had recently broken up with a long-term romantic partner (relationship condition).

At this point, participants were randomly assigned to one of four perspective conditions, closely modeled after those used in previous empathy research (e.g., Batson et al., 1997; Davis et al., 2004). Those in the *imagine-target* condition were asked to imagine the student's situation from the student's perspective (e.g., "As you listen to the interview, please imagine how the student feels..."). Those in the *imagine-self* condition, in contrast, were asked to imagine themselves in the student's situation, as if they were the student (e.g., "As you listen to the interview, please imagine how *you* would feel if you were the student..."). Those in the *objective* condition were asked to think about the student's situation objectively, from a relatively detached, dispassionate point of view—instructions designed to inhibit perspective-taking (e.g., "As you listen to the interview, closely listen to what the student says... Try to take a neutral perspective, being objective as possible about the situation...") See Davis et al., 2004). Finally, those in the *control* condition were not given any special instructions and proceeded immediately to the audiotaped interview. Gender pronouns in these instructions were matched to the participant's own gender, as well as to the gender of the confederate heard in the audiotape that followed.

Next, the audiotaped interview (approximately 5 minutes in length) was played. In the health condition, the student described persistent flu-like symptoms (e.g., fever and fatigue) that left him or her feeling too physically exhausted to attend classes, study, complete coursework by deadlines, or socialize with friends. Likewise, in the relationship condition, the student was

heard describing a recent problem that had been interfering with his or her academics and socializing, but the cause was an unexpected break-up with a long-term romantic partner that left the student feeling too depressed (in the student's own words, "sad," "devastated," and "empty inside") to attend to these other affairs. When the audiotape concluded, participants completed the dependent measures questionnaire and then were debriefed and dismissed. During debriefing, no participants mentioned any suspicion about the cover story or the authenticity of the interviews.

Dependent measures. The dependent measures questionnaire was identical in both problem conditions except for the difference in problem domain (i.e., items referred to health in the health condition and romantic relationships in the relationship condition). To conserve space, only measures for the health condition will be defined.

Two items assessed participants' empathic reactions. Participants rated on 1-10 scales how much sympathy they felt for the student (*none to very much*) and how much help they would give the student with if they were offered the opportunity (*no help to a great deal of help*).¹ The ease of self-simulation item asked participants how easy it was to imagine themselves experiencing health problems like those faced by the student (*very difficult to very easy*). Order of this item (before or after the two empathy items) was counterbalanced across participants.

Results and Discussion

Participant gender and question order did not qualify any of the effects reported below and are not discussed further. Responses for the two empathy items ($\alpha = .74$ and $.67$ in the health and relationship conditions, respectively) were averaged to create a composite "empathy" rating, one in each problem condition. Although the problem conditions concerned different

problem domains (health or relationships), results for both conditions are reported together below to highlight commonalities in findings.

Our main prediction was a stronger relationship between ease of self-simulations and empathic reactions in the imagine-target and imagine-self conditions than in the objective and control conditions. As the correlations in Table 1 show, this prediction was strongly supported in both problem conditions. In the imagine-target and imagine-self conditions, participants' empathy was strongly related to their ease of self-simulations—the more easily they could imagine themselves experiencing health (or relationship) problems, the more empathy they felt for the target. In contrast, participants' empathy was unrelated to their ease of simulations in the objective and control conditions. It should also be noted that this pattern emerged for both of the two items making up the empathy composite, as well as for the composite itself.

These conclusions were further supported by the results of hierarchical regression analyses. Specifically, we used ease of self-simulation ratings (after centering), a dummy-coded variable for perspective condition (imagine-target and imagine-self conditions coded as 1, objective and control conditions coded as 0), and their interaction to predict empathy ratings. In the health condition, ease of self-simulations was a significant predictor when it was entered in the first step (ease of self-simulations: $\beta = .48$, $t(94) = 5.23$, $p < .001$; perspective condition: $\beta = .08$, $t < 1$, *ns*), but more importantly, the predicted interaction was significant when it was entered in the second step ($\beta = .26$, $t(93) = 2.02$, $p = .05$, $\Delta R^2: F(1, 93) = 4.10$, $p = .05$). This interaction revealed that ESS ratings were a stronger predictor of empathy in the two perspective-taking conditions than in the objective or control conditions. The same was true in the relationship condition: ease of self-simulations was a significant predictor when it was entered in the first step (ease of self-simulations: $\beta = .33$, $t(81) = 2.46$, $p < .05$; perspective condition: $\beta = .17$, $t(81) =$

1.65, *ns*), and the interaction was significant when it was entered in the second step ($\beta = .30$, $t(80) = 1.97$, $p = .05$, $\Delta R^2: F(1, 80) = 3.86$, $p = .05$). Again, ESS ratings were a stronger predictor of empathy in the two perspective-taking conditions. To better illustrate these interactions, we plotted expected empathy ratings for participants whose ESS ratings were 1 standard deviation above or below the mean for their perspective condition, separately for each problem condition. Figures 1a and 1b (health and relationship conditions, respectively) display these expected empathy ratings.

Thus, imagining from one's own perspective and imagining from target's perspective had similar effects; in both cases, participants were more empathic if they could easily imagine themselves in the target's situation, and less empathic if they could not. That both forms of perspective-taking had parallel effects suggests that both operate by a common underlying mechanism—imagining oneself in the target's situation and then using these self-related thoughts as a basis for judging one's empathic reactions. That such a strikingly similar pattern of findings was observed across two very different need situations (i.e., problems with health and romantic relationships) strengthens our confidence in the reliability and validity of these results.

In contrast to prior work (e.g., Batson et al., 1997), perspective-taking instructions had no overall effect on mean empathy levels. As Figures 1a and 1b illustrate, there was a non-significant tendency for those in two perspective-taking conditions (imagine-target and imagine-self) to report higher empathy, but this pattern was due entirely to the participants in those conditions for whom it was easiest to engage in self-simulation (i.e., those with high ESS ratings). However, it is worth noting that there was a main effect of instructional set for one of the two items making up the empathy composite—feelings of sympathy for the target. Average sympathy ratings were higher in the two perspective-taking conditions than in the objective and

control conditions (health condition: $M_s = 6.3$ vs. 5.6 , $t(95) = 1.45$, $p = .15$; relationship condition: $M_s = 7.1$ vs. 6.1 , $t(82) = 2.00$, $p < .05$). This pattern therefore replicates earlier work showing that perspective-taking generally increases compassion for a target. More importantly, however, Study 1 provides initial evidence that ESS affects empathy above and beyond any direct effect of instructional set.

Study 2

Earlier we suggested that the ESS heuristic is more likely to be employed when there is at least some ambiguity regarding the other person's actual experiences. When the other person's experiences are unknown, one's own experiences are potentially informative, but when the other person's experiences are known with certainty, one's own experiences are less informative. In the latter case, observers may refrain from engaging in self-simulation. One's own imagined experiences with the flu, for example, can suggest how a friend suffering from the flu may be feeling, particularly if the friend has not described her specific symptoms and reactions. But if the friend has described those feelings clearly and explicitly, one's own imagined experiences are unnecessary and self-simulation is pointless. In such cases, ESS consequently becomes a less potent predictor of empathy.

We examine the ambiguity of the target person's experiences in this study to see if this is another variable moderating the relationship between empathy and ESS. Participants read a scenario about a student involved in an automobile accident, the severity of which varied across conditions. Some participants learned that the accident was severe and that the student had been seriously injured (unambiguous-severe condition), others learned that the accident was relatively minor and the student had escaped injury (unambiguous-minor condition), and a third group received no information about the severity of the accident or the nature and extent of the

student's injuries (ambiguous condition). We predicted that participants' ease of self-simulations would be related to their empathy for the student, but only when the student's injuries and outcome were ambiguous.

Method

Participants. University of Florida students ($N= 131$) enrolled in an elementary psychology course took part in this study to fulfill a research exposure requirement. We did not record participants' gender in this or any of the following studies.

Procedure. Participants completed all aspects of the study individually on personal computers. The first screen described how a group of UF students had been interviewed about traumatic experiences in their lives (ostensibly as part of a study on memory for traumatic experiences across the lifetime conducted by some developmental psychologists on campus). Participants learned that they would be reading excerpts from an interview with one particular student ("Jill"), who had discussed an automobile accident she was involved in the previous year, and then making judgments about that student.

At this point, the computer randomly assigned participants to one of three ambiguity conditions. In the unambiguous-severe condition, participants read that Jill's car had been struck broadside by another motorist who ran a red light at a high rate of speed, severely injuring her and totaling her car (causing \$15,000 damage). They learned that she spent 6 days in the hospital recovering from her injuries (e.g., broken pelvis and ribs, concussion, internal bleeding), and the troubles she had over the past year coping with the accident (e.g., numerous doctor visits, physical rehabilitation, lingering physical pain, inability to complete coursework). Those in the unambiguous-minor condition read a similar scenario (another motorist ran a red light at a low speed, striking Jill's car broadside) except that the damage was very limited. They learned that

she had suffered only minor bruises and scratches in the accident, her car sustained only minor damage (\$1000), she reported no lingering emotional or physical problems, and her life had fully returned to normal since the incident. In the ambiguous condition, unlike the other two conditions, no specific information was provided about the damages or injuries. Instead, participants were given a range of damage estimates for her automobile (between \$1000 and \$15,000), were told that Jill mentioned being injured in the accident but did not specify the exact nature of her injuries, and did not discuss any lingering consequences of the accident in her current life. To lend credibility to the cover story, the photograph of a young college-aged woman appeared on the screen next to the scenario text.

Next, participants completed the dependent measures questionnaire, which asked them to rate on 1-10 scales how much sympathy they felt for Jill (*none* to *very much*), how much help they would give Jill if given the opportunity (*no help* to *a great deal of help*), and how easily they could imagine themselves in her situation (*very difficult* to *very easy*). Finally, as a manipulation check, participants were asked how certain they were that they knew how Jill was affected by the accident (*very uncertain* to *very certain*).

Results and Discussion

Manipulation check. The manipulation of outcome ambiguity was successful: Participants in the unambiguous-severe and unambiguous-minor conditions were more certain they knew how Jill was affected by the accident ($M_s = 5.33$ and 6.20 , respectively, $t(85) = 1.76$, $p > .05$) than those in the ambiguous condition ($M = 4.09$), $t_s > 2.65$, $p_s < .01$.

Main analysis. Responses to the two empathy items ($\alpha = .73$) were averaged to form a composite empathy rating. To examine our hypothesis that ESS would be used only when the target person's outcomes were ambiguous, we performed hierarchical regression analyses using a

dummy coded variable for ambiguity condition (unambiguous-severe and -mild conditions coded as 0, ambiguous condition coded as 1), ease of self-simulations (centered), and their interaction to predict composite empathy ratings. Neither ambiguity condition ($\beta = -.09$, $t(128) = -1.04$, *ns*) nor ease of self-simulations ($\beta = .03$, $t < 1$, *ns*) were significant when they were entered in the first step of the analysis. However, as predicted, the interaction between ESS and ambiguity condition was significant when it was entered in the second step ($\beta = .35$, $t(127) = 3.46$, $p < .01$; $\Delta R^2: F(1, 127) = 11.98$, $p < .01$).²

To illustrate the nature of this interaction more clearly, we plotted expected empathy ratings for participants whose ease of self-simulations ratings were 1 standard deviation above or below the mean for their ambiguity condition. Figure 2 displays these expected empathy ratings. As can be seen in this figure, ease of self-simulation was positively related to empathy when the victim's needs were ambiguous ($r = .42$, $p < .01$), but unrelated when the victim's needs were unambiguously severe or minor ($r_s = .09$ and $.03$, $p_s > .10$).

When the target person's experiences were ambiguous, it appears that participants used their ESS as an inferential tool to resolve the ambiguity. They were more empathic to the extent they could imagine themselves in a similar situation. On the other hand, when the target person's experiences were unambiguous, participants' feelings of empathy were based more on the target person's objective outcomes and less on their own imagined experiences in the target's situation. In further support of this idea, participants in the unambiguous-severe condition ($M = 7.68$) were more empathic than those in the ambiguous condition ($M = 6.42$), $t(84) = 3.32$, $p < .001$, who in turn were slightly but non-significantly more empathic than those in the unambiguous-minor condition ($M = 5.94$), $t(87) = 1.16$, $p > .10$.

Study 3

Thus far, we have shown that people's empathic feelings for another person are often associated with the ease with which they can imagine themselves in similar situations. The use of this ESS heuristic is more likely when observers are instructed to engage in perspective-taking (Study 1), and when there is some ambiguity regarding the target's experience that makes self-simulation more likely (Study 2). We have also argued that ESS is relied upon because other inference strategies can be slow, effortful, and resource-demanding, while imagining from one's own perspective offers a speedier, less effortful, and more efficient alternative. Our view of the ESS heuristic is therefore in accordance with the conventional view of other judgment heuristics as time- and resource-saving devices (e.g., Chapman & Johnson, 2002). In this study, we examine more directly the notion that ESS functions as a resource-saving heuristic; to the degree that this is true, then ESS ought to be used more when time and mental resources are in short supply.

We also address a potential limitation of Studies 1 and 2. In both of those studies, ESS was measured by means of a single self-report item. In Study 3, we directly manipulate ease of self-simulations, strengthening the robustness and generalizability of our claim. Specifically, participants read brief descriptions of several negative events (e.g., getting a flat tire while driving home from work, being stabbed by a mugger) and rated how much sympathy they would feel for someone who experienced each one. Half of the events (identified in pre-testing) were easy to imagine happening to the self, and half were more difficult to imagine. In addition, and independent of this event "imaginability" factor, half of the events were relatively easy to cope with and half were more difficult. Finally, to manipulate cognitive resources, half of the participants made their sympathy ratings while performing a demanding secondary task, whereas the other half were not required to perform this task.

We had several predictions. First, participants should feel more sympathy for persons experiencing events that are more difficult to cope with, reflecting the fact that such events would cause a person more emotional or physical harm. Second, if people rely on ESS when judging their empathy, participants should feel more empathy for persons experiencing events that are easy (rather than difficult) to imagine happening to themselves. Third, if ESS functions to save time and resources, the effect of event imaginability (i.e., greater sympathy for events that are easier to imagine happening to the self) should be more pronounced among participants who rate their empathy while performing a cognitively-demanding secondary task.

Method

Pretest. Pre-test participants ($N= 11$) were presented with a large list of negative events, and rated how easily they could imagine each one happening to themselves (*very difficult* to *very easy*), and how well an average person would cope with that event (*very poorly* to *very well*) on separate 1-10 scales. The average of imaginability and coping ratings was then computed across participants. A total of 12 events were selected so that the set would represent high or low values on each of the two variables and would roughly represent the four possible combinations of these variables (see Appendix A).

Participants for main study. Participants in the main study were University of Florida students ($N= 65$) enrolled in an elementary psychology course who received credit towards a research exposure requirement.

Procedure. All portions of this study were completed on computers. Instructions on the first screen told participants that they would read about 12 negative events that could happen to a person, one at a time, and rate how much sympathy they would feel for that person on a scale from 1 (*none*) to 10 (*very much*). Approximately half of the participants received additional

instructions for the letter-rehearsal task. These participants learned that before each event was presented, an 8-letter string of consonants (e.g., KWRDJBHZ) would appear on the screen for a short time and their task was to rehearse and memorize it. After making their sympathy rating for that event, they would be asked to recall the letter string and type it into a box on the screen. This process would repeat for all 12 events, with a different letter string for each one. Participants then read and made sympathy ratings for all of the events, in the same fixed order. Next, as a manipulation check, the same set of events was presented once again and participants rated each one on the imaginability and coping dimensions (using the same questions and response scales as in the pre-test). Finally, participants were thanked, debriefed, and dismissed.

Results and Discussion

Manipulation Check. The distraction task was effective in taxing participants' cognitive resources. Most participants were able to correctly recall at least the first 3-4 letters of each 8-letter string (Average % across all trials = 59%), but very few were able to recall all 8 letters and in their exact ordinal position. Thus, the task was sufficiently challenging and difficult.

In addition, the manipulations of event imaginability and coping were successful: the easy to imagine events were rated easier to imagine than difficult to imagine events ($M_s = 6.39$ vs. 3.12), $F(1, 64) = 225.50$, $p < .001$, and the easy to cope with events were rated easier to cope with than the difficult to cope with events ($M_s = 5.59$ vs. 2.75), $F(1, 64) = 254.47$, $p < .001$. (There were no interactions between the imaginability and coping factors for ratings of either imaginability or coping, $F_s < 1$, $p_s > .20$).

Main Analysis. Our main analyses addressed two important questions: Did participants feel more sympathy for events that were easier to imagine happening to the self than for events that were more difficult to imagine? And was this effect of event imaginability even more

pronounced when participants' cognitive resources were constrained by performing a distracting secondary task? To find out, we averaged for each participant the 3 sympathy ratings within each event category and submitted these averaged ratings to a 2 (event imaginability: easy vs. difficult) X 2 (event coping: easy vs. difficult) X 2 (distraction condition: distraction vs. no-distraction) mixed factorial ANOVA with distraction condition as the only between-subjects factor.

The results of this analysis fully supported our predictions. Sympathy was greater for events that were easy rather than difficult to imagine happening to the self ($M_s = 6.42$ vs. 5.05), $F(1, 63) = 90.68, p < .001$, partial $\eta^2 = .59$, for events that were difficult rather than easy to cope with ($M_s = 6.87$ vs. 4.60), $F(1, 63) = 407.58, p < .001$, partial $\eta^2 = .87$, and when participants were distracted rather than not distracted ($M_s = 6.07$ vs. 5.40), $F(1, 63) = 8.69, p < .01$, partial $\eta^2 = .12$. In addition, and as predicted, there was a significant imaginability X distraction interaction, $F(1, 63) = 5.97, p < .05$, partial $\eta^2 = .09$. As Figure 3 shows, easy to imagine events evoked more sympathy than difficult to imagine events when participants were not distracted (collapsing across the event coping factor), $t(38) = 5.71, p < .001$, but even more so when they were distracted, $t(25) = 7.50, p < .001$. Even more specifically, for easy to imagine events, sympathy was significantly higher in the distraction condition than the no-distraction condition ($t(63) = 3.57, p < .001$); no such difference existed for the difficult to imagine events ($t(63) = 1.27, ns$). Thus, distraction specifically increased sympathy for events that were easy to imagine happening to the self.

None of the other effects was significant, $F_s < 1.2$, including the interaction between distraction condition and event coping, indicating that the moderating influence of cognitive distraction was specific to the imaginability of the event. Thus, when participants' cognitive

resources were limited, they were even more likely to employ their ease of self-simulations and feel greater sympathy for those who experienced events they could easily imagine happening to themselves. They were not more likely, however, to take the severity of the event into account and feel greater sympathy for those who experienced events that are more difficult to cope with.

Study 4

There is an alternative account for our findings we have not dealt with until now, which is that the imaginability of an event is correlated with other variables, and those variables may be related to empathy. For example, events that are easy to imagine happening to the self may also be easy to imagine happening to other people (e.g., the typical person), may occur more commonly to everyone (self and others), may be relatively easy to cope with, and so forth. Those other factors—the imaginability of an event for others, the perceived likelihood of an event, and the perceived ability to cope with an event—may themselves be importantly related to empathy, and thus, may account for the positive relationship between ESS and empathy we observed across our studies.

To provide more direct evidence that empathic feelings are specifically related to the ease of imagining oneself in the target person's situation, rather than thoughts about others' imagined experiences or thoughts about a person's ability to cope in that situation, we attempted to measure each of these thoughts and examine their unique contributions to feelings of empathy. We did so by having participants read scenarios describing a person in need and rating their feelings of empathy for that person. In addition, they rated the need situation along a number of dimensions (e.g., event imaginability, coping, and likelihood for self and for the typical student)

Our prediction is that ESS will uniquely predict feelings of empathy for the target person, above and beyond the contribution of the other event factors like the imaginability of the event for others and own (or others) perceived coping ability.

Method

Participants. Participants were University of Florida students ($N= 277$) who received credit towards a research exposure requirement for their elementary psychology course.

Procedure. All aspects of this study took place on personal computers. Participants were informed that they would be reading the case summaries of 4 different students at their university who had sought treatment from the university student counseling offices for distressing events in their recent lives. After these preliminary instructions, participants read paragraph-length descriptions of 4 different students and made a variety of judgments about each, with the order of each scenario counterbalanced across participants.

One scenario described a student (“Robert”) who had been seriously injured in a hit-and-run accident and the trouble he was having recovering from his injuries; another described a student (“Ben”) who had a fight with his best friend whom he suspected of making romantic advances towards his girlfriend; another described a student (“Kristine”) who developed a rare but non-fatal lung disease while travelling and how this illness prevented her from pursuing her interests in sports; and another described a student (“Jill”) who received a worse-than-expected grade on a course paper which she feared would hurt her chances of being admitted to graduate school. The scenarios detailed some of the unique social or emotional problems each student was having adjusting, and how these problems were hindering (to varying degrees) the student’s ability to keep up with coursework and maintain acceptable grades.

The judgments participants made for each scenario fit into one of three categories: empathy judgments, judgments about own imagined experiences, and judgments about the imagined experiences of the typical student. Specifically, the two empathy items asked participants how much sympathy they felt for the student (*none to very much*) and how much help they would give the student if they were offered the opportunity (*no help to a great deal of help*), on 1-10 scales. In the category pertaining to own imagined experiences, participants rated on 1-10 scales how easy it was to imagine themselves in a situation like the student's (*very difficult to very easy*), how likely they were to be in that situation sometime in the future (*very unlikely to very likely*), and how they would cope with that situation (*very poorly to very well*). Judgments pertaining to the imagined experiences of the typical student were similar, except the questions referred to the "typical student" rather than the self (e.g., participants were asked how easy it was to imagine the typical student in a situation like that of the target). Order of the three categories of judgments was counterbalanced across participants.

Results and Discussion

Responses to the two empathy items within scenarios ($\alpha > .63$) were averaged to create composite empathy ratings (one for each scenario). To examine which types of thoughts were most important in influencing empathic feelings, we conducted multiple regression analyses for each scenario. Specifically, we used participants' ratings of their own and typical student's imagined experiences to predict their composite empathy rating for the student. The results of these analyses are displayed in Table 2. As can be seen from this table, the only variables consistently related to participant's empathy for the student was their ease-of-simulation *for self* (i.e., ESS) and their *own* perceived ability to cope with the student's problems. Empathy ratings were positively related to ESS in all but one of the scenario conditions, and negatively (and

independently) related to own perceived coping ability in all of the scenario conditions, all $ps < .05$. In other words, the more easily participants could imagine themselves in the student's situation, and the more difficulty they thought they would have coping, the more empathy they felt for the student. With few exceptions, participants' empathy was unrelated to whether they could imagine the typical student in that situation (i.e., ease-of-simulation for the typical student), the typical students' perceived likelihood of being in that situation, or perceived ability to cope with it, once the self-related thoughts were controlled for.³

It is noteworthy that empathic feelings were related to own imagined outcomes, but not those of other people. Although others' outcomes would seem just as informative or diagnostic of the target's outcomes (if not more), it appears that they are discounted in favor of one's own imagined outcomes. We suspect this difference has much to do with the relative speed, salience, and confidence with which people can imagine their own versus other people's outcomes. Simply put, one's own outcomes come to mind more quickly, are known with greater confidence, and are more salient than those of other people (Chambers, Kruger, & Chan, 2009). Thus, it is not surprising that when judging empathy for a target, one's own imagined outcomes have primacy. The idea that one's own imagined outcomes are given more weight than others' outcomes because they are more accessible and salient is also perfectly consistent with our argument that ESS functions as a time- and energy-saving cognitive heuristic—self thoughts are highly accessible and therefore utilized to infer empathy for another.

That empathic feelings were more closely linked to self-related outcomes is also consistent with the idea that ESS functions to signal those who are within the "circle of moral regard." Being able to easily imagine oneself in the target's position suggests a closeness between self and other; the easier the self-simulation, the closer the connection to the target and

the greater the empathy. On the other hand, being able to easily imagine the typical student in the target's position says little or nothing about the nature of one's own relationship to the target and thus has no bearing on feelings of empathy.

General Discussion

These four studies offer considerable support for our central contention: that empathic reactions to the experiences of others are often related to the ease with which observers can imagine themselves in the target's position. This effect was found when targets were presented via written scenarios and when they were presented via audiotape; it was found for a range of issues including exam grades, poor health, relationship problems, and auto accidents; and it was found not only when ease of self-simulation was measured through self-report but when it was manipulated as well. Moreover, the use of this particular heuristic strategy was conditioned by predictable factors. As expected, ESS had a stronger relationship with empathic reactions under specifiable conditions: when deliberate efforts had been made to take the target's perspective (Study 1), when there was ambiguity regarding the target's experience (Study 2), and when a competing cognitive task made more effortful inference strategies less likely (Study 3). Moreover, we demonstrated that the association between self-related thoughts and empathic reactions is independent of thoughts about others, such as the degree to which the target's problem can be imagined happening to the typical person (Study 4). Thus, we believe that these studies constitute a strong *prima facie* case for existence of the ESS heuristic.

Possible Objections to the ESS Argument

Although we feel that the current studies provide convincing support for the operation of an ESS heuristic, we also realize that the novelty of this approach requires an explicit consideration of some counter-arguments. The first such argument is that *the case for the ESS*

heuristic is essentially tautological. According to this view, the independent variable (ESS) and the dependent variable (empathic responses) are conceptually indistinguishable from one another. This position contends that empathizing by its very nature includes both feelings of sympathy for the target as well as easily imagining oneself in the target's position. Thus, to find a strong correlation between the two is not surprising; it is simply a matter of correlating empathy with empathy.

We believe that this argument suffers from two critical flaws. First, although empathy has been defined over the years in both affective and cognitive ways, considerable research has demonstrated that these various facets of empathy are in fact distinguishable. In fact, many investigations have revealed the separate, unique influences of cognitive and affective facets of empathy (e.g., Davis & Oathout, 1987, 1992; Batson et al., 1997; Verhofstadt, Buysse, Ickes, Davis, & Devoldre, 2008; Mooradian, Davis, & Matzler, in press). Thus, at the theoretical level, there is nothing tautological about our argument; ESS and emotional/behavioral empathic responding are separate and unique constructs, but they are also related in predictable ways.

The second flaw in this argument is that there is likewise no empirical evidence of tautology. If ESS and empathy are simply one and the same, then the relationship between them should be stable—and substantial—across all studies and all conditions. Of course, this is not the case. Instead, the ESS-empathy association is strong under certain specifiable circumstances, such as when recent perspective-taking attempts have been made (Study 1) or when there is ambiguity about the target's internal states (Study 2). Under other conditions, however, the association between ESS and empathy is close to zero—clearly not the pattern one would find if these two variables were actually tapping the same construct.

The second possible argument against our ESS claim is that the evidence offered here contradicts itself. At first glance, the results of Study 1—in which ESS was strongly related to empathy when participants were instructed to take the target's (or their own) perspective—might seem contradictory with the results of Study 3, in which the effect of ESS was stronger in the distraction condition where such deliberate perspective-taking efforts would be more difficult. However, these results are not contradictory at all. Although perspective-taking has traditionally been conceived of as an effortful process of imagining from the other's perspective (e.g., first constructing a mental representation of the target, then determining how the target would respond to the situation given his or her idiosyncratic personal characteristics, etc.), there is no guarantee that people actually engage in such effortful, cognitively-demanding activities when attempting to take another's perspective. Instead, as we argue in this paper, they may rely on the relatively quick, efficient, and resource-saving ESS heuristic: imagining how they would feel in the victim's position and then basing their empathic responses on the ease of such self-simulation. Indeed, the finding that ESS was a stronger predictor of empathy in the two perspective-taking conditions in Study 1—and that the imagine-target *and imagine-self* instructions produced identical patterns—supports that argument. At the same time, and like other judgment heuristics (Chapman & Johnson, 2002; Epley et al., 2004), the ESS heuristic is most useful when one's ability to engage in more effortful cognitive processes is constrained. Hence, we found in Study 3 that reliance on the ESS heuristic (i.e., more empathy for easy- than difficult-to-imagine events) increased when participants were distracted.

Finally, a third possible objection that might be raised against our ESS claim is that *this work is simply a re-statement of previous work*—in essence, “old wine in a new bottle.” According to this view, considerable prior work has demonstrated that taking another's

perspective produces feelings of sympathy and increased likelihood of helping (e.g., Batson et al., 1997). Our demonstration here that perceived ESS is predictably associated with empathic responses is nothing more than what the previous work has shown—that perspective-taking facilitates empathy.

Again, we feel that this argument suffers from a key misunderstanding of our position, albeit a more subtle one. Prior work has indeed convincingly demonstrated that when people deliberately attempt to imagine how a distressed target is feeling they are more likely to experience feelings of sympathy and concern, and to offer more help (see Batson, 1991; Davis, 1996). What we are proposing is rather different, and focuses on a mechanism by which such effects occur. We are arguing that when perspective-taking efforts are made, the people who find it easiest to engage in self-simulation are the most likely to then report empathic responses. In short, taking another's perspective will usually lead to empathic reactions, but it is especially likely to happen when observers find it easy to imagine *themselves* in the victim's position. Figures 1a and 1b illustrate this argument very well. For those receiving imagine-target and imagine-self instructions, but who found it *difficult* to imagine, the level of empathic response was not much different from those who received objective or no instructions. The strongest empathic response was found only for those who found it easiest to imagine themselves in the victim's position. This, we believe, is a novel and important finding, and we now turn to a consideration of some of its implications.

Relevance of ESS to the Role of the Self in Perspective-taking

Like the other approaches reviewed earlier that emphasize the role of the self in perspective-taking (Ames, 2004; Davis et al., 2004; Epley et al., 2004), we argue that observers will often make use of a relatively effortless self-related heuristic—in this case, the ease with

which they can imagine themselves in the target's position. Unlike those other approaches, however, we argue that the output of this strategy is not some inference regarding the target's traits, attitudes, mental states or emotional reactions. Instead, ESS is used to determine the observer's *own* empathic response to the target's plight: feelings of sympathy and willingness to help. As a result, these studies represent a very different way in which heuristic strategies may influence important social outcomes.

Thus, this work helps to shed light on a somewhat poorly understood topic: the mechanism by which perspective-taking efforts actually produce changes in the emotional and motivational states of observers. That perspective-taking yields such changes is well-established. As previously noted, perspective-taking manipulations reliably produce greater levels of sympathy/compassion for targets (Batson et al., 1997; Coke, Batson, & McDavis, 1978). These emotional states in turn significantly contribute to pro-social behaviors such as overt helping and willingness to forgive (see Batson, 1991, and Davis, 1994 for reviews). However, it is not clear exactly how perspective-taking manipulations produce these effects.

One possibility is that perspective-taking influences subsequent responses through the time-consuming and effortful processes it prompts in the observer. According to this view, perspective-taking leads the observer to engage in multiple non-trivial tasks: recognizing that one's own viewpoint and the target's may not be the same, suppressing one's own perspective, and then constructing a representation of the target's hypothesized perspective (e.g., Karniol, 2003). In essence, this argument is based on the notion that the *end result* of an effortful perspective-taking process—that is, a cognitive representation of the target's imagined perspective—is responsible for empathic reactions.

Our results by no means indicate that such effortful perspective-taking is unimportant. However, they do suggest that when observers engage in perspective-taking it is not certain that the final product of such cognitively expensive activity will determine their subsequent affective response. Instead, observers may also use a relatively simple judgment—how easy it is to imagine themselves in the target’s position—as a basis for determining their own affective reaction. Study 1 found that participants in the perspective-taking conditions (specifically, the imagine-target and imagine-self conditions) were more empathic than those in the objective and control conditions, but only if they could easily imagine themselves in the target’s position. In fact, those who could not easily imagine themselves in the target’s position were no more empathic than those in the other conditions. In short, perspective-taking by no means guarantees empathy for a target, and its effect seems to depend on whether observers can or cannot imagine themselves in the target’s position.

This discussion of perspective-taking and ESS leads us to a key question: to what degree does an ESS estimate *depend upon* making an explicit effort to imagine oneself in the target’s position? We can envision at least two answers to this question, which suggest the existence of two different forms such estimates may take. (Of course these two forms represent endpoints of a continuum and there is undoubtedly some middle ground between them.) First, ESS estimates will sometimes consist of the perceivers’ subjective sense of how easy it *actually was* to imagine themselves in the target’s position. This is the kind of estimate that would result after perceivers have made a meaningful attempt to imagine themselves in the target’s position, perhaps as a result of an instructional set that asks them to do so. ESS estimates in this case will be based on recent deliberate attempts to engage in self-simulation, and thus rely upon the most relevant possible information. We may describe these as “strong” ESS estimates.

On the other hand, ESS estimates will sometimes consist of the perceivers' subjective sense of how easy it *would be* to imagine themselves in the target's position. This is the kind of estimate that would result if perceivers have not made a meaningful attempt to imagine themselves in the target's position, perhaps because of an instructional set that inhibits such attempts or perhaps because the perceivers are not motivated enough to do so. In this case ESS estimates are based not on an actual self-simulation attempt, but on a quick and relatively superficial analysis of the target (similar to me in some way?) or the situation (have I been in this situation before?). This is the kind of estimate that is likely to result when perceivers are unexpectedly asked to produce one at the end of an experiment in which they were not instructed to take the target's perspective. We may describe these as "weak" ESS estimates.

Thus, an ESS estimate does not necessarily *require* explicit self-simulation, just as an estimate of how easy it would be to perform brain surgery does not require an actual attempt to do so. Moreover, both kinds of estimates may be associated with the empathy that perceivers feel for the target, although the results of Study 1 demonstrate that these associations will typically be greater and more reliable in the case of "strong" estimates based on actual self-simulation efforts. Perhaps relatedly, it should be noted that when such "strong" estimates are created as a result of actual self-simulation, they will also be accompanied by something more—the actual content of the self-simulation effort. That is, deliberate perspective-taking efforts will produce an actual "perspective" as well as a subjective perception of how easy it was to do so. Both kinds of information may influence subsequent empathic reactions.

Relevance of ESS to Other Possible Influences on Empathy

At this point, it is necessary to consider another factor that is related to empathy and which may be associated with ESS. That factor is *prior experience*—whether or not the observer

has ever been in the target's position. In everyday life, prior experience is often assumed to facilitate empathy, but the research evidence to date suggests that the relationship is far more complicated, and sometimes dependent upon the gender of the observer (Batson et al., 1996). The ESS account may help explain these mixed findings. If our logic is correct, then prior experience will increase empathy only if it becomes easier to imagine oneself being in the target's position again. However, having prior experience might actually *decrease* empathy if the result is to make it more *difficult* to imagine oneself in that position again. For example, having one's tax records audited by the government can certainly make one more empathic toward others who have been audited, but only if that experience makes one appreciate how easy it was to be audited in the first place ("I always file my tax returns on time—they must have picked me purely at random")—and thus how it could happen to oneself again in the future. On the other hand, a prior auditing could make one less empathic if the experience is perceived as an aberration and thus unlikely to happen again ("I procrastinated this year and ended up filing my tax return late. They picked me because of this mistake—I won't do that again"). As a result, whether or not prior experience increases empathy may ultimately depend on the type of self-related thoughts it evokes in the observer.

As it turns out, we have some data that bear on this issue. In all studies (except Study 3), we asked participants (yes or no) whether they had ever experienced the problem faced by the target person. We then compared empathic reactions among participants who had never experienced that problem with those of participants who had and either could or could not easily imagine themselves experiencing it again. Not surprisingly, those with prior experiences who *could* imagine experiencing it again were more empathic than those without prior experiences. However, and in line with our hypotheses, those with prior experiences who could *not* imagine

experiencing it again were equally or *less empathic* than those without prior experiences. This pattern was highly reliable and held across each and every study in which we assessed prior experiences.⁴ Thus, contrary to conventional wisdom, prior experience with a need will not always increase empathy. Rather, its effect will depend upon the type of self-related thoughts it arouses in the observer, and in particular, whether imagining oneself in the victim's position becomes easier (increasing empathy) or more difficult (decreasing empathy).

An Alternative Explanation

An alternative explanation for some of our findings is that ease of self-simulations is confounded with controllability or responsibility for the event. For example, some of the difficult to imagine events used in Study 3 (e.g., punching a wall in anger) were ones in which the victim had responsibility or control over the event and was therefore blameworthy, whereas some of the easy to imagine events (e.g., getting a flat tire) were ones in which the victim had little responsibility and control and was therefore blameless. Research (Betancourt, 1990; Weiner, 1980) shows that empathy is greater for victims who have little or no control over their outcomes, in which case it is unclear whether the greater empathy found for imaginable events in Study 3 is due to their greater imaginability (ESS), as we suggest, or because they were less controllable.

To address this potential confound, we conducted another study in which we independently manipulated the imaginability and controllability of the event, and examined the effect of both event factors on empathic feelings. In pilot testing ($N=7$ students), we identified a set of 12 events that were either high or low on imaginability and controllability (3 events for each possible combination), yet roughly equal (on average across combinations) in terms of the degree of harm they caused the victim. We then presented these events, in randomized order, to

a second group of participants ($N= 52$), who rated how much sympathy they would feel for someone who experienced each one (1= *none at all*, 10= *a lot*). There were two main findings of interest. First, a main effect of event controllability showed that participants were more sympathetic for victims' who experienced uncontrollable rather than controllable events ($M_s= 6.77$ vs. 6.41), $F(1, 51)= 4.21$, $p < .05$, consistent with prior research (Betancourt, 1990; Weiner, 1980). More important, and independent of this effect of event controllability, there was also a main effect of event imaginability: participants were more sympathetic towards targets who experienced easy to imagine rather than difficult to imagine events ($M_s= 6.86$ vs. 6.33), $F(1,51)= 15.25$, $p < .001$ (The interaction event imaginability and controllability was non-significant, $F(1,51)= 2.20$, $p > .10$), replicating findings from our other studies.) These results make it clear that ease of self-simulations influence empathic feelings, and that this effect is separate from perceptions of the victim's control or responsibility over their outcomes.

Broader Implications and Future Directions

One implication of this work is highly important and somewhat counterintuitive: empathic reactions and willingness to help may depend as much (or more) on the observer's own imagined outcomes than on the target's actual needs and experiences. Observers will sometimes feel little empathy for others simply because they cannot imagine themselves in the other's position, even if the other's needs are truly severe (as in the case of a victim afflicted with meningitis). In contrast, observers will sometimes feel considerable empathy simply because they can easily imagine themselves in the other's position, even if the other's needs are relatively minor (as in the case of a victim afflicted with the common cold).

Thus, there will often be a disconnect between the target's actual needs and the observer's perceptions of those needs, due to the observer giving too much consideration to his

or her own imagined outcomes and not enough to those of the target. In Study 3, for example, we found that the effect of event imaginability on sympathy ratings was independent of that of event coping (and that the availability of cognitive resources moderated the effect of the former variable only). In other words, events that were easier to imagine happening to the self elicited greater sympathy than those that were more difficult to imagine, regardless of whether those events were easy or difficult to cope with. The tendency to base empathic reactions on one's own imagined outcomes, then, can result in observers' overestimating or underestimating the needs of a victim, with potentially devastating consequences for both (as when male jurors are reluctant to side with female plaintiffs in sexual harassment cases because they cannot imagine themselves being the victims of harassment; Kenig & Ryan, 1986).

The second implication of these findings grows from its demonstration that use of a self-based heuristic (i.e., the degree to which one can imagine oneself in a target's position) can have direct emotional consequences (e.g., feelings of sympathy, sadness, and distress). Until now, virtually all prior work on heuristics has considered their role in producing relatively "cold" cognitive judgments such as the perceived likelihood of an event, the similarity between an object and category, and so forth (Chapman & Johnson, 2002; Schwarz & Vaughn, 2002). The present investigation indicates that people may use cognitive shortcuts for other purposes as well. Although it has long been recognized that relatively effortful cognitive judgments such as causal attributions are related to subsequent emotional reactions (e.g., Weiner, 1980), to our knowledge the studies reported here are the first to indicate that affective responses are also influenced by less effortful cognitive strategies.

In fact, these findings suggest that there may be much value in further exploring such "emotional heuristics." It is not difficult to imagine that other emotional responses may also be

determined at least in part by similar heuristic judgments. Self-ratings of anger, for example, might also be influenced by ESS, but in a negative way—the more difficult it is to imagine ourselves committing some transgression, the more anger we may feel toward targets who have transgressed in this way. Other such possibilities exist of course, and we believe that efforts to evaluate this idea hold much promise.

Finally, although we have provided a strong case for the existence of an ESS heuristic, the studies reported here do not address the issue of mediating mechanisms. We have argued for one such mechanism—that ESS serves as a signal that the target falls within one's circle of moral regard—but such a claim awaits empirical testing. Future research should examine this possibility by measuring the association between ESS, empathy, and constructs likely to reflect the "moral regard" construct. Some likely candidates would seem to be perceived similarity to the target, and measures of perceiver-target overlap. Future work might also usefully examine the association between ESS and other related responses. Personal distress, for example, is a common emotional reaction when witnessing another in need, but it is not clear that the circle of moral regard argument would predict a relationship between ESS and such a self-oriented emotion. Answering questions such as these will help provide a clearer picture of how, and when, this heuristic may be employed.

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Footnotes

1. In all of the studies (except Study 3), we included two additional dependent measures (both on 1-10 scales): perceptions of the severity of the target's situation (*very minor* to *very serious*) and how much it negatively affected the target (*not at all* to *very much*). These measures showed patterns similar to the two-item empathy composites. For example, in the health condition in Study 1, ESS ratings were positively related to perceptions of severity of the target's situation, and it negatively affecting the target, in the imagine-target and imagine-self conditions (r s between .33 and .64, p s < .08), but unrelated in the objective and control conditions (r s between .06 and .19, p s > .10). To keep our empathy measure conceptually cleaner, however, and avoid any possibility that our patterns were driven by these two items, we excluded them from the composite.
2. Because our primary focus was in examining whether ESS affects empathy more strongly when the target's needs are ambiguous (rather than unambiguous), our dummy coding procedure combined the two unambiguous conditions and compared them to the ambiguous condition. Of course, this particular coding procedure does not allow for a test of the effect of event severity (i.e., greater empathy for severe rather than minor events). Using an alternative coding procedure (1 for unambiguous-severe, 0 for ambiguous, -1 for unambiguous-minor), we find that empathy is greater as the severity of the event increases ($\beta = .26$, $t(93) = 2.02$, $p = .05$; see text for mean empathy in each condition), as would be expected.
3. Ease-of-simulation ratings for self and for the typical student were correlated across scenarios (r s between .37 and .58, p s < .001), suggesting that events that are easy to imagine happening to the self are also easier to imagine happening to others as well. Given their

overlap, we conducted multiple regressions similar to those in our main analyses, but excluding ease-of-simulations for self as a predictor. In this case, ease-of-simulations for the average student emerged as a significant independent predictor of empathy ratings in all scenarios (β s between .15 and .19, $ps < .05$) except one (Jill scenario: $\beta = .05$, *ns*). These results make it clear that the imaginability of the event is an important factor in empathic feelings, but that the imaginability of the event *for the self* is most important.

4. In Study 1, for example, we compared the empathy ratings of participants who had prior health or relationship problems and either *could* or *could not* imagine having those problems again (i.e., ESS ratings 1 standard deviation above or below the mean), with the empathy ratings of participants who had no prior problems. In the health condition, whereas participants who had prior problems and *could easily imagine having those problems again* were more empathic ($M = 6.86$) than those who had no prior problems ($M = 5.37$), those who had prior problems and *could not imagine having those problems again* were no more empathic ($M = 5.56$). And in the relationship condition, whereas participants who had prior problems and *could easily imagine having those problems again* were more empathic ($M = 7.62$) than those who had no prior problems ($M = 6.89$), those who had prior problems and *could not imagine having those problems again* were actually *less* empathic ($M = 6.04$).

Table 1. Correlations between ease of self-simulations and empathy measures (Study 1).

Problem condition and measure	Perspective condition			
	Imagine- target	Imagine- self	Objective	Control
Health Condition				
Sympathy for student	.64**	.57**	.22	.30
Willingness to help student	.55**	.38 [†]	.31	.27
Empathy Composite	.69**	.51**	.27	.34
Relationship Condition				
Sympathy for student	.48*	.45*	.17	.08
Willingness to help student	.63**	.37 [†]	.23	-.20
Empathy Composite	.60**	.46*	.24	-.05

Note: ** $p < .01$, * $p < .05$, [†] $p < .10$. The empathy composite was an average of standardized responses to the 2 empathy-related measures (e.g., sympathy and willingness to help the student).

Table 2. Regression coefficients relating empathy composites to imagined experiences of self and typical student (Study 4).

Measure	Scenario			
	Robert	Ben	Kristine	Jill
	β (SE)	β (SE)	β (SE)	β (SE)
Ease of simulation-Self	.12 [†] (.03)	.28** (.04)	.14* (.04)	.24** (.06)
Perceived ability to cope with problem-Self	-.16* (.04)	-.29** (.04)	-.21** (.04)	-.21** (.06)
Perceived likelihood of experiencing problem-Self	-.08 (.04)	-.05 (.05)	.09 (.05)	.01 (.06)
Ease of simulation-Typical Student	.12 [†] (.03)	.14* (.06)	.09 (.05)	-.01 (.08)
Perceived ability to cope with problem-Typical Student	-.12 [†] (.05)	-.07 (.06)	-.16** (.06)	-.09 (.07)
Perceived likelihood of experiencing problem-Typical Student	.00 (.04)	-.08 (.06)	-.04 (.05)	-.05 (.09)

Note: ** $p < .01$, * $p < .05$, [†] $p < .10$. Values reported are standardized beta coefficients (standard errors in parentheses). $N = 277$ for each scenario.

Figure 1a. Predicted empathy in the health condition as a function of ease of self-simulations and perspective condition (Study 1).

Figure 1b. Predicted empathy in the relationship condition as a function of ease of self-simulations and perspective condition (Study 1).

Figure 2. Predicted empathy as a function of ease of self-simulations and ambiguity condition (Study 2).

Figure 3. Average sympathy ratings as a function of event imaginability and distraction condition (Study 3).

Appendix A

Event Category:	Average pre-test rating of:	
	Imaginability:	Coping:
Easy to Imagine/High Coping:		
Given ticket for making illegal U-turn at intersection	6.9 (2.4)	6.9 (2.1)
Had flat tire while driving home from work	6.9 (2.8)	6.6 (1.9)
Had to have all of their wisdom teeth pulled	6.9 (3.5)	5.6 (2.0)
Easy to Imagine/Low Coping:		
Had their computer crash in the middle of writing an important class paper	6.5 (2.5)	3.9 (1.7)
Had their favorite pet dog or cat struck and killed by an automobile	5.4 (2.5)	3.6 (1.7)
Was denied admission to all graduate/medical/law schools they applied to	5.4 (2.8)	3.6 (2.1)
Difficult to Imagine/High Coping:		
Punched a wall in anger and broke hand	2.6 (2.0)	6.4 (2.1)
Went to hospital with alcohol poisoning after long night of drinking	2.7 (1.8)	5.6 (1.8)
Laughed at by strangers for having a strange hair style	2.9 (2.0)	6.9 (1.9)
Difficult to Imagine/Low Coping:		
Stabbed by a mugger while shopping at a store downtown	2.4 (1.2)	2.5 (1.4)
Got a sexually transmitted disease after "hooking up" with someone at a party	2.3 (1.6)	2.8 (1.6)
Had to sell their car and possessions after accumulating huge credit card debts	2.9 (2.1)	3.0 (1.6)