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7	<b>Do Bad People Deserve Empathy?</b>
8	Selective Empathy Based on Targets' Moral Characteristics
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3	Abstract
4	The relation between empathy and morality is a widely discussed topic. However,
5	previous discussions mainly focused on whether and how empathy influences moral
6	cognition and moral behaviors, with limited attention to the reverse influence of
7	morality on empathy. This review summarized how morality influences empathy by
8	drawing together a number of hitherto scattered studies illustrating the influence of
9	targets' moral characteristics on empathy. To explain why empathy is morally
10	selective, we discuss its ultimate cause, to increase survival rates, and five proximate
11	causes based on similarity, affective bonds, the appraisal of deservingness,
12	dehumanization, and potential group membership. To explain how empathy becomes
13	morally selective, we consider three different pathways (automatic, regulative, and
14	mixed) based on previous findings. Finally, we discuss future directions, including the
15	reverse influence of selective empathy on moral cognition, the moral selectivity of
16	positive empathy, and the role of selective empathy in selective helping and
17	third-party punishment.

*Keywords*: empathy, morality, justice, selective prosociality

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1	<b>Do Bad People Deserve Empathy?</b>
2	Selective Empathy Based on Targets' Moral Characteristics
3	Imagine the following scenarios and think about how you would feel: a
4	basketball player, famous for his flagrant fouls, accidentally sprains his ankle in a
5	game; a selfish co-worker, who always takes advantage of others' contributions, is
6	getting a divorce; a prisoner who has sexually assaulted dozens of children is
7	suffering from an incurable disease. When observing others suffer misfortune, people
8	usually show empathy toward them. However, if immoral people suffer – as in the
9	above scenarios – do people still show empathy?
10	Empathy is usually perceived as a moral virtue (e.g., Goldstein et al., 2014;
11	Nussbaum, 1996), and equal empathy for all people (regardless of whether the target
12	is socially distant or close) is attributed greater moral value than selective empathy
13	(Bloom, 2017; Fowler et al., 2021). However, in the above scenarios, both intuition
14	and rationality might lead us to show less empathy for immoral people. In other words,
15	it is widely accepted that empathy is selective depending on targets' moral
16	characteristics (Cameron et al., 2022; Wang et al., 2019). Indeed, a recent study found
17	that showing empathy towards a negative target (e.g., a White supremacist) would
18	bring the empathizer less respect and liking, compared with not showing empathy
19	(Wang & Todd, 2021).
20	Although such selective empathy is ubiquitous in daily life, there is a lack of
21	comprehensive research and no theoretical model to explain this phenomenon. In this

22 paper, we provide, for the first time, a comprehensive overview of selective empathy

1	based on targets' moral characteristics. We draw together a number of hitherto
2	scattered studies illustrating this phenomenon and explain why and how empathy
3	becomes selective in response to the moral characteristics of targets. Previous
4	discussion has mainly focused on the way that empathy influences moral cognition
5	and moral behavior (for reviews, see Decety & Cowell, 2014; Eisenberg, 2000;
6	Eisenberg & Miller, 1987; Hoffman, 1987, 2001). By contrast, this review focuses on
7	the influence of moral cognition on empathy and points to new directions for research.
8	Before discussing whether individuals show varied empathic responses
9	towards moral and immoral individuals, we need to clarify what counts as moral vs.
10	immoral behavior. Although variation within and across cultures makes it hard to
11	provide a completely consistent definition, there is a consensus about what acts (and
12	agents) are considered moral or immoral (Atari et al., 2022; Brambilla & Leach, 2014;
13	Brambilla et al., 2011; Curry et al., 2019; Fiske et al., 2007; Graham et al., 2013, 2011;
14	Haidt & Graham, 2007; Haidt & Joseph, 2004; Schein & Gray, 2018), and these
15	societal values emerge early in life (Decety & Cowell, 2018; Hamlin et al., 2007;
16	Surian et al., 2018; Ting & Baillargeon, 2021).
17	What Is Empathy?
18	Empathy refers to the process of sharing and understanding the feelings of
19	others (Cohen & Strayer, 1996; Decety & Jackson, 2004; Decety & Lamm, 2006;
20	Singer & Lamm, 2009). It is generally seen as an important, moral emotion (Decety &
21	Cowell, 2014; Eisenberg, 2000; Eisenberg & Miller, 1987; Hoffman, 2001; Hume,

22 1896; Slote, 2007; Smith, 2010). With increasing research on empathy, the concept

1	has been variously defined by different researchers (for a review, see Cuff, 2016).
2	Given the complexity of these definitions, more and more researchers recommend a
3	focus on specific sub-concepts or components when discussing empathy, rather than
4	relying on the word empathy in general (Decety & Cowell, 2014; Hall & Schwartz,
5	2019; Weisz & Cikara, 2021). Here, we focus on three components of empathy in
6	discussing responses based on the moral characteristics of targets.
7	The emotional component of empathy refers to the process of sharing another
8	person's emotion, also called emotional contagion or emotional matching (e.g.,
9	feeling sad when seeing others feeling sad or feeling happy when seeing others
10	feeling happy; Hatfield et al., 1994). The cognitive component of empathy refers to
11	the understanding of others' emotions, also called affective perspective-taking (Decety
12	& Cowell, 2014; Decety & Jackson, 2004). The motivational component of empathy
13	refers to concern about sufferers, including the motivation to alleviate their pain (de
14	Waal, 2008; de Waal & Preston, 2017) – often called <i>empathic concern</i> or compassion
15	or sympathy by some researchers (Batson et al., 1983; Davis, 1983; Eisenberg, 2000;
16	Goetz et al., 2010; Hoffman, 2001; Klimecki, 2019; for the claim that compassion and
17	sympathy are different, see Dutton et al. 2006). When seeing others suffer, individuals
18	usually exhibit one or more of these three components of empathy (emotional sharing,
19	affective perspective-taking, and empathic concern).
20	Yet people do not always show empathy toward another's misfortune. Indeed,
21	sometimes, people feel pleasure at another's misfortune, defined as Schadenfreude, a

22 form of *counter-empathy* (Lanzetta & Englis, 1989; Portmann, 2000; Takahashi et al.,

1	2009). Counter-empathy can be viewed as the opposite of empathy. Research has
2	shown that people often show counter-empathy toward competitors, superiors, or
3	immoral individuals (Cikara et al., 2014; Lanzetta & Englis, 1989; Singer et al., 2006;
4	Takahashi et al., 2009).
5	Evidence for Selective Empathy Based on Targets' Moral Characteristics
6	Behavioral, physiological, and neural studies all demonstrate that empathy is
7	selective, depending on targets' moral characteristics. Behavioral studies have found
8	that when watching an immoral person experience bad things, people feel less
9	empathic than when watching a moral person experience the same things. By
10	manipulating the description of characters' moral traits (such as honesty, sincerity, and
11	trustworthiness) or morally-related acts (such as helping or harming), researchers
12	have found that individuals report less compassion or more pleasure when learning
13	that immoral others experience a misfortune as opposed to learning that moral others
14	experience a misfortune (Brambilla & Riva, 2017; Rodriguez-Gomez et al., 2020).
15	Individuals perceive the social pain of immoral others as less painful than that of
16	moral or neutral others (Riva et al., 2016). Furthermore, individuals feel happier at the
17	punishment of a person who has committed multiple immoral acts than at the
18	punishment of a person who has committed a single immoral act, and individuals'
19	evaluation of the person's moral characters plays a mediating role in this process
20	(Berndsen & Tiggemann, 2020). These findings confirm that others' moral
21	characteristics can modulate adults' empathy, and that the influence of others' morally
22	related acts on empathy is mediated by the evaluation of their moral character.

1	Additionally, studies of "moral circles" have found that individuals often place
2	"villains" outside the scope of moral concern (Crimston et al., 2016, 2018), in line
3	with the above findings that individuals show reduced empathy or even
4	counter-empathy towards immoral people.
5	However, it should be acknowledged that social desirability can also influence
6	people's self-reported feelings. Under the pressure of the norm of not showing
7	empathy towards negative targets (Wang & Todd, 2021), people may actually feel
8	equally empathic, but report feeling less empathic toward immoral as compared to
9	moral others. Accordingly, self-report in combination with physiological recordings or
10	brain imaging can provide more convincing evidence for whether individuals show
11	varied empathy towards moral and immoral others.
12	Stellar et al. (2014) compared people's emotional and physiological responses
12 13	Stellar et al. (2014) compared people's emotional and physiological responses when they learned of the misfortune of a moral or immoral target. The targets' moral
12 13 14	Stellar et al. (2014) compared people's emotional and physiological responses when they learned of the misfortune of a moral or immoral target. The targets' moral behaviors were manipulated by giving the participants messages describing the
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12 13 14 15 16 17 18 19 20 21	Stellar et al. (2014) compared people's emotional and physiological responses when they learned of the misfortune of a moral or immoral target. The targets' moral behaviors were manipulated by giving the participants messages describing the targets' selfish or cooperative behaviors. Then, participants watched a video clip of the target talking about his or her misfortunes, and participants' physiological responses were recorded as they watched. Participants reported feeling less compassionate and showed physiological responses indicating less compassion (greater heart rate and reduced respiratory sinus arrhythmia activity, Stellar et al., 2015) toward the selfish target than toward the cooperative target. Event-related potential (ERP) studies were also conducted to compare

22 individuals' empathy towards moral and immoral others. Cui et al. (2016) compared

1	individuals' brain responses toward painful or non-painful pictures (i.e., bodies with
2	wounded or non-wounded parts, such as a finger cut or not cut by scissors) of blood
3	donors, killers, or unidentified targets. Painful pictures elicited larger amplitude of N2
4	than non-painful pictures when the target was a blood donor or was unidentified.
5	However, this difference disappeared when the target was a killer. The difference in
6	N2 to painful vs. non-painful pictures was localized in the ventral medial prefrontal
7	cortex (vmPFC) and the rostral anterior cingulate cortex (rACC) areas. Given that N2
8	is believed to reflect individuals' emotional arousal (Fan & Han, 2008), these findings
9	imply that individuals showed less emotional sharing towards immoral others than to
10	moral others.

Li et al. (2018) compared individuals' brain responses when watching painful 11 12 and non-painful pictures of different targets. Unlike the study by Cui et al. (2016), participants were asked to imagine the body part in the picture as that of a moral or 13 immoral person. Although N2 responses did not differ for moral as compared to 14 immoral targets, the responses of P3 did differ, with a larger amplitude for painful 15 pictures than nonpainful pictures when the target was imagined as moral but no 16 amplitude difference when the target was imagined as immoral. Given that P3 is 17 believed to reflect attention redistribution driven by the top-down regulation of 18 empathy (Cheng et al., 2014; Cheng et al., 2012; Coll, 2018; Fan & Han, 2008), these 19 findings suggest that targets' moral characters influence the top-down regulation of 20 empathy. More specifically, participants may reduce their attention to painful stimuli 21 when imagining the target as an immoral person (MacNamara et al., 2009). 22

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1	There are two plausible explanations for the contrasting findings of Cui et al.
2	(2016) and Li et al. (2018). First, whether the identity of the target is specified or
3	imagined broadly can influence the modulation of empathy. In Cui et al. (2016), the
4	identity of the target was specified as a blood donor or a killer, leading to more direct
5	selectivity at the early stage of empathy. In Li et al. (2018), participants needed to
6	imagine the target as moral or immoral themselves, and each participant might have
7	chosen different prototypes for moral or immoral others, leading to selectivity at a
8	later stage of empathy. Second, the gravity of target immorality might influence the
9	modulation of empathy. A killer is usually perceived as extremely immoral, whereas a
10	general description of "immoral" can refer to various transgressions, including minor
11	wrongdoings, such as taking advantage of others. More extreme immorality might
12	lead to a more immediate selectivity of empathy during the early emotion arousal
13	process without top-down modulation, as in Cui et al. (2016).
14	Additionally, a functional magnetic resonance imaging (fMRI) study
15	demonstrated that males (but not females) showed less empathy towards an unfair
16	confederate who had damaged their benefits as compared to a fair confederate who
17	ensured their benefits (Singer et al., 2006). Males' empathy-related activation in
18	pain-related brain areas (fronto-insular and anterior cingulate cortices) was weaker,
19	and their brain activation in reward-related areas (left ventral striatum and nucleus
20	accumbens) was stronger, towards unfair as compared to fair confederates. The
21	gender effect found in this study also suggested that males might be more likely to
22	show reduced empathy towards immoral others than females, a possibility that

# 1 warrants further examination.

2	Taken together, using self-report, physiological, and brain imaging measures,
3	prior research has found that the three components of adult empathy are all influenced
4	by targets' moral characteristics. More specifically, individuals are less likely to share
5	the feelings of immoral as compared to moral targets (Berndsen & Tiggemann, 2020;
6	Brambilla & Riva, 2017; Rodriguez-Gomez et al., 2020), tend to perceive the social
7	pain of immoral targets as less painful than that of moral targets (Riva et al., 2016),
8	and show less empathic concern for immoral as compared to moral targets (Berndsen
9	& Tiggemann, 2020; Brambilla & Riva, 2017; Rodriguez-Gomez et al., 2020; Stellar
10	et al., 2014). Furthermore, the ERP findings suggest that the influence of targets'
11	moral characteristics on empathy can be achieved either at the emotional arousal stage
12	(Cui et al., 2016) or via the top-down regulation of empathy (Li et al., 2018),
13	depending on the specific context.
14	The above studies were all conducted with adults. Studies on children have
15	also found that their empathy is selective, depending on targets' moral characteristics.
16	When presented with picture-stories, 4- to 8-year-old children reported feeling more
17	pleasant and less sorry for a protagonist's misfortune when the protagonist intended to
18	harm rather than to help others, and this effect was more pronounced among older
19	children (Schindler et al., 2015; Schulz et al., 2013). Another study examined
20	children's facial expressions when watching the punishment of an antisocial puppet
21	who tricked them and a prosocial puppet who gave toys to them (Mendes et al., 2018).
22	Whereas 4- and 5-year-olds mainly produced frowns when watching either puppet

1	being hit, six-year-olds produced more smiles with frowns when watching the
2	antisocial puppet being hit than when watching the prosocial puppet being hit. By
3	implication, 6-year-olds showed selective empathy based on targets' moral
4	characteristics.
5	Overall, we see that the evidence mainly supports the selectivity of empathy
6	based on targets' moral characteristics that are related to the violation of harm/care
7	(e.g., Cui et al., 2016; Schindler et al., 2015; Schulz et al., 2013) and
8	fairness/reciprocity principles (e.g., Berndsen & Tiggemann, 2020; Brambilla & Riva,
9	2017; Riva et al., 2016; Singer et al., 2006; Stellar et al., 2014). It remains unclear
10	whether targets' violation of moral values in other domains, such as ingroup/loyalty
11	and purity/sanctity, can also influence empathy towards them. For example, it is
12	unclear whether individuals will show reduced empathy towards a man who is fired
13	for disclosing the secrets of his own company to competitors or a man who has a
14	stomachache after eating his dead pet dog.
15	Justice in a Broad Sense
16	One important basis for the moral selectivity of empathy is the evaluation of
17	how much the target deserves to suffer (Gibbs, 2019; Goetz et al., 2010; Hein &
18	Singer, 2008; Simpson et al., 2014). Justice in a broad sense refers to the principle that
19	people receive what they deserve (Lerner, 1980). More specifically, bad things happen
20	to immoral people, and good things happen to moral people. Driven by such justice
21	beliefs (Hafer & Rubel, 2015; Lerner, 1980; Vermunt, 2014), individuals tend to
22	believe that immoral targets deserve to suffer, thereby showing reduced empathy (for

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more details on this process, see the deservingness-appraisal account in the next
section). When the targets' suffering is linked to their immoral behavior, for example,
a murderer is sentenced to death for murder, it is widely accepted that the murderer's
suffering is what he or she deserves, and that people will show less empathy for the
murderer. However, if the targets' suffering is not linked to their immoral behaviors,
for example, a murderer suffers from cancer, how far will people respond with
empathy?

A recent study of way that empathizers are evaluated provides a preliminary 8 9 answer. People showed less respect or liking towards empathizers who expressed empathy towards a negative target whose suffering was causally linked to the target's 10 negative behaviors (e.g., a White supremacist suffered from the stress of working in 11 12 an organization peddling racist views), whereas people showed more respect or liking towards empathizers who expressed empathy towards a negative target whose 13 suffering was not linked to the target's negative behaviors (e.g., a White supremacist 14 suffering from cancer) (Wang & Todd, 2021). These findings demonstrate that the 15 way in which third-party observers evaluate empathizers is influenced by the causal 16 links between the targets' negative characteristics and the targets' suffering. However, 17 things might be different when people are empathizers themselves. 18 Indeed, previous findings suggested that individuals show less empathy 19 towards immoral targets than moral targets, regardless of whether the targets' 20 misfortune was directly brought about by their immoral behaviors (e.g., Berndsen & 21 Tiggemann, 2020; Rodriguez-Gomez et al., 2020; Schindler et al., 2015; Schulz et al., 22

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1	2013), or by accidents unrelated to their immoral behaviors (e.g., Brambilla & Riva,
2	2017; Stellar et al., 2014). Limited empathy for targets' suffering, even when the
3	suffering was unrelated to their immoral characteristics, might indicate a kind of
4	broad justice belief, namely that bad people deserve bad outcomes anyhow. This kind
5	of justice belief may not be rational, but it is widespread. However, given that
6	previous studies did not directly compare the moral selectivity of empathy when
7	targets' morally-related acts are related or unrelated to their misfortunes, future
8	studies should explore this issue more systematically.
9	Person-based or Act-based selectivity
10	Previous studies suggest that the selectivity of empathy can be either
11	person-based (i.e., a response towards targets' moral characters) or act-based (i.e., a
12	response towards targets' moral behaviors). Some studies manipulated the description
13	of characters' moral traits (such as honesty, sincerity, and trustworthiness) and found
14	that individuals show less empathy towards targets described as immoral than targets
15	described as moral (Brambilla & Riva, 2017; Li et al., 2018; Riva et al., 2016). Other
16	studies manipulated targets' morally related acts (such as helping or harming) without
17	directly describing the targets as moral or immoral and found that individuals show
18	less empathy towards targets who have behaved immorally than targets who have
19	behaved morally (Rodriguez-Gomez et al., 2020; Singer et al., 2006; Stellar et al.,
20	2014). Therefore, both the moral character and the morally-related acts of a target can
21	influence empathy, which is also why we frame our paper as a review of selective

empathy based on targets' moral characteristics, rather than on moral character or

1 moral behavior.

The person-based selectivity and act-based selectivity of empathy are not 2 3 completely independent. A target's moral character can be inferred from the target's moral behavior. More specifically, the severity and frequency of a target's immoral 4 behavior can lead to different assessments of immoral character, which further 5 impacts the level of empathy. For example, one study manipulated the frequency of 6 targets' immoral acts and found that individuals feel happier about the punishment of 7 a person who has committed multiple immoral acts as compared to a single immoral 8 9 act (Berndsen & Tiggemann, 2020). Moreover, individuals' evaluation of the person's moral characters mediated the influence of the frequency of immoral acts on 10 individuals' Schadenfreude. These findings suggest that the act-based selectivity of 11 12 empathy might come from a person-based inference regarding morally-related acts. Differences also exist between the person-based and act-based selective 13 empathy. When the target's moral character is described as immoral in general, 14 15 individuals might be more likely to show reduced empathy towards the immoral target, regardless of whether the target's misfortune is linked to their immorality or not, 16 driven by the broad justice belief mentioned in the above section. In contrast, when a 17 target's immoral behavior is described, empathy might be more influenced by whether 18 or not the target's misfortune is linked to that immoral behavior. More studies are 19 needed to examine these possibilities. 20 21 However, the belief in a just world can also lead to some unreasonable

22 attributions in daily life. People might be likely to blame a victim based on their

1	beliefs that "good things usually happen to good people" and that "bad things usually
2	happen to bad people" (Lerner, 1980). For example, when watching a target suffering
3	from painful electric shocks due to their errors in a learning task, participants tended
4	to reject and devalue the target when they could not avoid seeing the target suffer
5	(Lerner & Simmons, 1966). In this way, people rationalized the target's suffering and
6	no longer needed to feel empathy for the target. In such circumstances, people's
7	reduced empathy towards innocent victims may redound on their evaluation of the
8	victims (for more details, see the future direction part).
9	Why Empathy Is Morally Selective?
10	The previous section has summarized findings of selective empathy based on
11	targets' moral characteristics. In general, individuals tend to show less empathy
12	towards immoral targets than towards moral targets. This section will consider why
13	selective empathy is morally based from both ultimate and proximate perspectives,
14	based on previous theories and models of selective empathy. The ultimate cause may
15	be consistent with that of selective prosociality. On this view, the moral selectivity of
16	empathy is the product of evolution and can increase survival rates at the individual
17	and group levels. The proximate causes may be more diverse. Below, we summarize
18	five different accounts of proximate causes: the perceived-similarity account, the
19	affective-link account, the deservingness-appraisal account, the dehumanization
20	account, and the potential group-membership account.

# 21 Ultimate Causes



Empathy entails both cognitive and emotional costs. When feeling empathic

1	towards others, individuals experience a cognitive struggle (Cameron et al., 2019) and
2	risk experiencing personal distress (Cameron et al., 2016). Indiscriminate empathy
3	might cause fatigue and/or financial costs (Cameron et al., 2019). The moral
4	selectivity of empathy ensures that individuals spend more empathy-related resources
5	on moral targets and less on immoral targets, which could increase the survival rates
6	of both individuals and groups. For individuals, such selectivity is likely to prevent
7	resources being wasted on undeserving persons and gives empathizers more
8	opportunities to build reciprocal relationships with moral, rather than immoral, others
9	who are less likely to reciprocate when the empathizers need help. The selectivity of
10	empathy is broadly consistent with the approach-avoidance tendency to approach
11	rewarding and avoid threatening stimuli (Kaldewaij et al., 2017).
12	For groups, the moral selectivity of empathy can promote indirect reciprocity
13	within a group by shaping targets' behaviors. More prosocial behaviors based on
14	empathy directed at moral rather than immoral targets can encourage moral behaviors
15	and discourage immoral behaviors by both targets and other observers (Van de
16	Vondervoort et al., 2018). This can increase indirect reciprocity within a group. For
17	example, C is more likely to empathize with A after learning that A is a daily helper.
18	Then C will be more likely to help A, even though C has not been directly helped by
19	A before. After receiving positive feedback from C, A will also become more likely to
20	continue helping others, including C. Such indirect reciprocal relationships can
20 21	continue helping others, including C. Such indirect reciprocal relationships can promote prosociality and cooperation within a group and further increase the survival

1	Vondervoort et al., 2018). In other words, selective empathy based on targets' moral
2	characteristics serves as a signal of moral standards within a group. This also explains
3	why individuals make more negative evaluations of people who empathize with
4	negative targets (e.g., White supremacist) than people who empathize with positive
5	targets (e.g., children's hospital worker) (Wang & Todd, 2021); empathizing with
6	negative targets indicates tolerance of such behaviors.
7	Overall, the moral selectivity of empathy could increase the survival rates of
8	both individuals and groups, which may be its ultimate cause.
9	Proximate Causes
10	We propose the five accounts below to tentatively explain why empathy
11	becomes morally selective in specific situations.
12	Perceived-similarity account
13	The extent to which individuals perceive similarity between themselves and
14	targets is an important modulator of empathy (for a review, see Preston & de Waal,
15	2002). The Perception-Action Model (PAM) of empathy proposes that individuals'
16	perception of the state of a target can activate corresponding representations and
17	further activate somatic and autonomic responses, leading to emotional sharing with
18	the target (Preston & de Weel 2002) According to this model the more similar
	the target (Freston & de waai, 2002). According to this model, the more similar
19	empathizers and targets are, the more similar empathizers' and targets' representations
19 20	empathizers and targets are, the more similar empathizers' and targets' representations are, which leads to more similarity in state-matching (Preston & de Waal, 2002).
19 20 21	empathizers and targets are, the more similar empathizers' and targets' representations are, which leads to more similarity in state-matching (Preston & de Waal, 2002). Variation in the perceived similarity of moral and immoral targets might

1	on empathy. Individuals may perceive moral persons as more similar to themselves
2	than immoral persons, given that individuals tend to view themselves as more moral
3	than others (e.g., Allison et al., 1989). In this way, individuals would show more
4	empathy toward moral persons than immoral persons. Riva et al. (2016) were the first
5	to explore the possible role of perceived similarity in selective empathy towards moral
6	and immoral targets. However, they failed to find a significant mediating role for the
7	perceived similarity of the target's moral standing (moral versus immoral) and
8	evaluations of the target's social pain, an indicator of cognitive empathy. It remains to
9	be seen whether perceived similarity could play a mediating role between the moral
10	characteristics of the target and other components of empathy, such as empathic
11	concern. In another perspective on the issue of mediation, some researchers have
12	argued that perceived similarity is actually based on liking or disliking the target (e.g.,
13	Batson et al., 2005). Individuals show more empathy toward similar others because
14	they like them more than dissimilar others. Therefore, affective links between
15	empathizers and targets may play a more important role in the moral selectivity of
16	empathy than perceived similarity in itself.

# 17 Affective-link account

The liking or disliking of targets is an important factor that can influence individuals' emotional reactions to targets' misfortune (Singer et al., 2006; Smith & van Dijk, 2018). According to the balance theory of emotion, "three-element units are balanced when all relations between the elements are positive or two are negative" (Smith & van Dijk, 2018, p.295). More specifically, when individuals dislike a person

1	(a negative element), the person's negative feelings about his or her misfortune (a
2	negative element) will be balanced by the observer's positive feelings about the
3	misfortune (a positive element). In this way, individuals tend to show reduced
4	empathy or counter-empathy towards the misfortune of those they dislike.
5	With respect to the influence of targets' moral characteristics on empathy,
6	Singer et al. (2006) were the first to propose that individuals' affective links with
7	moral or immoral others can explain the selectivity of empathy. This view was
8	initially used to explain selective empathy in a second-party situation where immoral
9	others directly undermined participants' benefits and were disliked by participants. A
10	similar logic could also apply to a third-party moral situation. Individuals prefer
11	persons who have behaved morally toward others, because these persons may also
12	benefit them in the future; meanwhile, individuals dislike persons who have done
13	immoral things to others, because these persons are more likely to hurt them or
14	undermine their benefits in the future (e.g., Brambilla & Leach, 2014; Hamlin et al.,
15	2011). In this way, individuals' dislike of immoral persons and the negative
16	experience of immoral persons can be balanced by individuals' positive feelings
17	towards the negative experience of immoral persons, leading to reduced empathy or
18	even counter-empathy towards them. One study provided direct evidence for this
19	affective-link account. Participants' relative dislike of the immoral target as compared
20	to the moral target mediated the relation between the manipulation of targets' moral
21	characteristics and Schadenfreude at their misfortune (Brambilla & Riva, 2017).
22	It is important to note that the affective-link account is based on the premise

1	that empathizers value morality. However, how much individuals value morality can
2	vary, as reflected in a person's moral identity. Moral identity refers to "the degree to
3	which being a moral person is important to an individual's identity" (Hardy & Carlo,
4	2011, p212). If a person has a high moral identity, the person will perceive moral
5	targets as more similar to themselves and prefer moral targets over immoral targets,
6	thereby showing less empathy towards immoral targets than moral targets. However,
7	if a person has a low moral identity, meaning that the person does not care to be moral
8	or might be immoral themselves, the perceived-similarity account might not be able to
9	explain their selective empathy, and the person might not even show selective
10	empathy towards moral and immoral targets.
11	Deservingness-appraisal account
12	Deservingness is also widely believed to modulate the level of empathy, or
13	more encodifically, it influences the metivational common and of empethy, normaly
	more specifically, it influences the motivational component of empatity, namely
14	compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010;
14 15	compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010; Hein & Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals
14 15 16	<ul> <li>more specifically, it influences the motivational component of empathy, namely</li> <li>compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010;</li> <li>Hein &amp; Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals</li> <li>tend to evaluate how much the target deserves compassion. Simpson et al. (2014)</li> </ul>
14 15 16 17	<ul> <li>more specifically, it influences the motivational component of empathy, hamely</li> <li>compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010;</li> <li>Hein &amp; Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals</li> <li>tend to evaluate how much the target deserves compassion. Simpson et al. (2014)</li> <li>summarized four rules used to determine whether the suffering person is worthy of</li> </ul>
14 15 16 17 18	<ul> <li>more specifically, it influences the motivational component of empathy, namely</li> <li>compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010;</li> <li>Hein &amp; Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals</li> <li>tend to evaluate how much the target deserves compassion. Simpson et al. (2014)</li> <li>summarized four rules used to determine whether the suffering person is worthy of</li> <li>compassion. If the person is "(1) responsible for their suffering; (2) had prior</li> </ul>
14 15 16 17 18 19	more specifically, it influences the motivational component of empathy, namely compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010; Hein & Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals tend to evaluate how much the target deserves compassion. Simpson et al. (2014) summarized four rules used to determine whether the suffering person is worthy of compassion. If the person is "(1) responsible for their suffering; (2) had prior knowledge of the risk or danger; (3) has the means to address the situation; and/or (4)
14 15 16 17 18 19 20	more specifically, it influences the motivational component of empathy, namely compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010; Hein & Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals tend to evaluate how much the target deserves compassion. Simpson et al. (2014) summarized four rules used to determine whether the suffering person is worthy of compassion. If the person is "(1) responsible for their suffering; (2) had prior knowledge of the risk or danger; (3) has the means to address the situation; and/or (4) their distress has no valid organizational or social explanation" (Simpson et al., 2014,
14 15 16 17 18 19 20 21	more specifically, it influences the motivational component of empatity, namely compassion or empathic concern (for reviews, see Gibbs, 2019; Goetz et al., 2010; Hein & Singer, 2008; Simpson et al., 2014). Before showing compassion, individuals tend to evaluate how much the target deserves compassion. Simpson et al. (2014) summarized four rules used to determine whether the suffering person is worthy of compassion. If the person is "(1) responsible for their suffering; (2) had prior knowledge of the risk or danger; (3) has the means to address the situation; and/or (4) their distress has no valid organizational or social explanation" (Simpson et al., 2014, p.480), then the person deserves to suffer and is not worthy of compassion. By

1	empathic toward the sufferer's misfortune. However, when the misfortune is the fault
2	of the sufferer, individuals feel less empathic or even show counter-empathy (Gibbs,
3	2019). For example, individuals showed more empathy towards patients who
4	contracted AIDS through blood transfusion than those who contracted AIDS through
5	drug-abuse (Decety et al., 2010).
6	The influence of deservingness also applies to morally charged situations.
7	Driven by a belief in justice, individuals tend to believe that bad people deserve bad
8	consequences (Hafer & Rubel, 2015; Lerner, 1980; Vermunt, 2014). Such
9	expectations were confirmed by a recent ERP study. Rodriguez-Gomez et al. (2020)
10	compared individuals' ERP responses when reading sentences describing a fortunate
11	or unfortunate outcome for agents previously described as prosocial or antisocial.
12	They found that the brainwaves related to semantic fit (N400) were stronger when
13	participants read sentences stating that antisocial agents met an unfortunate outcome
14	as compared to when prosocial agents did so. This suggests that individuals expect
15	misfortune to befall antisocial rather than prosocial agents.
16	When a person who has harmed others suffers, the belief that this person
17	deserves this misfortune can reduce empathy. Such a reaction is quite common in
18	everyday life. For example, when a serial murderer is sentenced to death, most people
19	do not care about the murderer's negative feelings and may even feel happy about the
20	ending of his life. This deservingness-appraisal account of the moral selectivity of
21	empathy is supported by previous findings. Participants' evaluation of the

22 deservingness of targets' misfortune mediated the relation between the manipulation

1	of targets' moral characteristics and Schadenfreude at their misfortune (Brambilla &
2	Riva, 2017). In addition, dislike of targets mediated the relation between the
3	manipulation of moral characteristics and the evaluation of deservingness (Brambilla
4	& Riva, 2017), suggesting that the deservingness-appraisal process can also be
5	influenced by affective link (Smith & van Dijk, 2018).

#### 6 **Dehumanization account**

Dehumanization is another factor that might explain the moral selectivity of 7 empathy. When people perceive less humanity in targets, they are less likely to protect 8 9 the targets' moral rights (Bandura, 1999; Bastian et al., 2011; Castano & Giner-Sorolla, 2006) and show less empathy toward the targets' misfortune (Cehajic et al., 2009). 10 Individuals who engaged in immoral behaviors are usually perceived as showing less 11 12 humanity (Bastian et al., 2011). Given the negative relation between empathy and dehumanization (Cehajic et al., 2009), people might show less empathy toward 13 immoral others due to their perception of less humanity in immoral as compared to 14 moral others. 15

The dehumanization account was supported by Riva et al. (2016). They found that participants' dehumanization of targets mediated the relation between the manipulation of targets' moral characteristics and participants' evaluation of targets' social pain. Future studies could examine whether dehumanization can explain the moral selectivity of other components of empathy, such as emotional sharing and empathic concern.

#### 22 Potential group-membership account

1	Group membership is also a widely studied modulator of empathy. People show
2	greater empathy and empathy-related brain responses towards ingroup members than
3	outgroup members (for reviews, see Cikara et al., 2014; Eres & Molenberghs, 2013;
4	Montalan et al., 2012; Vanman, 2016; Vollberg & Cikara, 2018). The modulation of
5	empathy by group membership might explain the moral selectivity of empathy.
6	Individuals tend to cooperate with prosocial others and avoid cooperating with
7	antisocial others (for reviews, see Kurzban et al., 2015; Nowak, 2006; Nowak &
8	Sigmund, 2005). Therefore, moral persons can be viewed as potential ingroup
9	members, while immoral persons can be viewed as potential outgroup members. For
10	example, after watching someone help others on several occasions, we will form a
11	good moral impression of this person and also want to be the person's friend. By
12	contrast, after watching someone harm others on several occasions, we will form a
13	bad moral impression of this person and view the person as a potential enemy. Given
14	that individuals usually have more empathy towards ingroup members than outgroup
15	members, moral targets (potential ingroup members) might provoke more empathic
16	feelings than immoral targets (potential outgroup members). However, more evidence
17	is needed for this assumption.

In addition, the group membership of targets might interact with targets' moral characteristics to influence empathy. It would be interesting to examine empathy responses when there is a conflict between the group membership of targets and their moral characteristics. For example, researchers could compare individuals' empathy for the suffering of an ingroup member who engaged in immoral acts and the

suffering of an outgroup member who engaged in moral acts (for a similar design, see
 Meidenbauer et al., 2018).

3 The five accounts above explain the proximate causes of moral selectivity of empathy from different perspectives. The affective-link account, the dehumanization 4 5 account, and the potential group-member account can explain the selectivity of all three components of empathy, including emotional arousal, cognitive empathy, and 6 empathic concern or compassion. The other accounts focus more on a particular 7 component. The deservingness account explains the selectivity of empathic concern 8 9 or compassion (Gibbs, 2019; Goetz et al., 2010; Hein & Singer, 2008; Simpson et al., 2014), and the similarity account explains the selectivity of emotional arousal 10 (Preston & de Waal, 2002). The relative importance of these five accounts for the 11 12 moral selectivity of empathy remains unclear. Affective links may play a more fundamental role in the moral selectivity of empathy because they mediate the effects 13 of perceived similarity and deservingness appraisal (Batson et al., 2005; Brambilla & 14 15 Riva, 2017). It is also possible, however, that the importance of different accounts varies across situations and individuals. Future research could examine these accounts 16 of the moral selectivity of different components of empathy. These accounts also 17 provide several possible ways to link the moral selectivity of empathy with other 18 types of selective empathy. 19

20

#### How Does Empathy Become Morally Selective?

In this section, we discuss in more detail the process by which empathy
becomes selective in response to targets' moral characteristics. Decety and Meyer

1	(2008) propose a dual-processing model in which empathy involves both an automatic,
2	affective, bottom-up process and a controlled, cognitive, top-down process. First,
3	individuals automatically share the feelings of others by matching their perception of
4	others' feelings with their own feeling-related reactions via a bottom-up process. Then,
5	self-other awareness enables individuals to distinguish their own feelings states from
6	those of others. Next, individuals take the perspective of the other and regulate their
7	empathic levels through executive control and emotion regulation via a top-down
8	process. This latter regulation process may be closely related to empathic concern
9	(Decety & Meyer, 2008). Based on previous findings and the dual-processing model,
10	we propose three possible explanations for the process of selective empathy:
11	automatic, regulative, and mixed.
12	An Automatic Pathway
12 13	<b>An Automatic Pathway</b> The <i>automatic</i> explanation is that individuals automatically show less empathy
12 13 14	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down
12 13 14 15	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route,
12 13 14 15 16	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route, individuals will show less emotional arousal towards antisocial targets than prosocial
12 13 14 15 16 17	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route, individuals will show less emotional arousal towards antisocial targets than prosocial targets, following by less empathic concern and cognitive empathy. This pathway is
12 13 14 15 16 17 18	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route, individuals will show less emotional arousal towards antisocial targets than prosocial targets, following by less empathic concern and cognitive empathy. This pathway is supported by the ERP findings of Cui et al. (2016) that N2, an early ERP component
12 13 14 15 16 17 18 19	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route, individuals will show less emotional arousal towards antisocial targets than prosocial targets, following by less empathic concern and cognitive empathy. This pathway is supported by the ERP findings of Cui et al. (2016) that N2, an early ERP component indicating emotional arousal, showed larger amplitude for painful pictures than
12 13 14 15 16 17 18 19 20	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route, individuals will show less emotional arousal towards antisocial targets than prosocial targets, following by less empathic concern and cognitive empathy. This pathway is supported by the ERP findings of Cui et al. (2016) that N2, an early ERP component indicating emotional arousal, showed larger amplitude for painful pictures than non-painful pictures when the target was a blood donor or was unidentified, but
12 13 14 15 16 17 18 19 20 21	An Automatic Pathway The <i>automatic</i> explanation is that individuals automatically show less empathy for antisocial targets than prosocial targets without going through some top-down regulation. If empathy becomes morally selective through this automatic route, individuals will show less emotional arousal towards antisocial targets than prosocial targets, following by less empathic concern and cognitive empathy. This pathway is supported by the ERP findings of Cui et al. (2016) that N2, an early ERP component indicating emotional arousal, showed larger amplitude for painful pictures than non-painful pictures when the target was a blood donor or was unidentified, but showed no difference for painful as compared to non-painful pictures when the target

1	appearance of the stimuli suggest that the selectivity of empathy is quick and thus
2	very likely to be automatic (for a similar logic in deciding whether a response is
3	automatic, see Kahneman, 2011).
4	However, this automatic explanation cannot explain all the findings of
5	selective empathy based on targets' moral characteristics. For example, it cannot
6	explain why the P3 component, the indicator of top-down regulation of empathy,
7	showed varied responses towards moral and immoral targets (Li et al., 2018). A
8	pathway that can deal with more complex situations is needed.
9	A Regulative Pathway
10	With the gradual deepening of empathy research, more and more researchers
11	view the production of empathy from a regulative perspective (Cameron, 2018;
12	Cameron et al., 2022; Gross, 2015; Thompson et al., 2019; Zaki, 2014). Previous
13	studies have found that people can regulate their empathy and show insensitivity to
14	others' suffering (Cameron et al., 2011). Such a process is similar to the regulation of
15	other emotions (for a review, see Tamir, 2006). Similarly, in the case of the moral
16	selectivity of empathy, it is possible that individuals might first show equal levels of
17	empathy for both moral and immoral targets, and then down-regulate their empathy
18	for antisocial targets.
19	Empathy is usually modulated in three different ways: via situation selection,
20	attention modulation, and appraisal. Each type of modulation can help to explain
21	individuals' selective empathy towards moral vs. immoral people. The first way to
22	modulate empathy is via situation selection (Gross, 1998). Individuals can avoid or

1	increase empathy by avoiding or approaching empathy-inducing cues (Cameron, 2018;
2	Thompson et al., 2019; Zaki et al., 2014). If people do not want to show empathy for
3	immoral targets, they might be more likely to leave situations that could arouse their
4	empathy for immoral targets. For example, we might be less willing to listen to a
5	selfish colleague's complaint about his divorce from his wife than to listen to a kind
6	colleague's similar complaint.
7	The second way to modulate empathy is via attention modulation. People can
8	regulate their empathy by modulating their attention to empathy-inducing cues
9	(Cameron, 2018; Thompson et al., 2019; Todd et al., 2012; Zaki et al., 2014).
10	Individuals might allocate less attention to the misfortune of immoral as compared to
11	moral targets. The ERP study by Li et al. (2018) provided some support for this
12	proposal. The late ERP component of empathy (P3) showed larger amplitude towards
13	painful pictures than nonpainful pictures when the target was imagined as moral but
14	showed no such amplitude difference when the target was imagined as immoral. P3 is
15	believed to be associated with the top-down processing of stimulus significance
16	(MacNamara et al., 2009). Although the pictures of suffering were actually the same
17	sets of pictures of wounded body parts, participants viewed the suffering of an
18	immoral person as less significant than that of a moral person, suggesting that
19	attention modulation happens during the processing of painful pictures of immoral
20	targets.
21	If individuals have attended to the suffering of targets, they can still modulate

their empathy via reappraisal, the third way to modulate empathy. Reappraisal has

1	three different forms (Zaki et al., 2014). First, modulation of empathy can occur by
2	changing the perception of targets' feelings. When processing others' suffering,
3	individuals might shift their beliefs about the extent of an immoral target's suffering.
4	For example, when listening to your selfish colleague's sad story about his divorce,
5	you might think that he is not actually as sad as he claims to be. This type of
6	reappraisal is supported by previous findings that individuals tend to perceive the
7	social suffering of an immoral person as less acute than that of a moral person (Riva
8	et al., 2016), suggesting that individuals' perception of antisocial targets' feelings have
9	shifted. This interpretation might also explain why the perception of the physical pain
10	of an immoral as compared to a moral person does not differ (Riva et al., 2016).
11	Beliefs about physical pain based on objective descriptions are likely harder to shift.
12	Second, appraisal processes might operate via a re-evaluation of the deservingness of
13	the target's misfortune. Individuals show less empathy when they believe that the
14	sufferers are responsible for their own suffering, or in other words, they deserve their
15	suffering (Bloom, 2017; Geotz et al., 2010; Zaki, 2014). By reappraising the
16	misfortune of immoral persons, people come to believe that immoral persons deserve
17	their misfortune, which is possibly driven by the justice-based belief that those who
18	behave antisocially will be punished and that those who behave prosocially will be
19	rewarded (Hafer & Rubel, 2015; Lerner, 1980). One study supporting this
20	deservingness explanation found that targets' moral characteristics influenced
21	participants' feelings about the misfortune of targets via the mediation of participants'
22	evaluation of whether those misfortunes were deserved (Brambilla & Riva, 2017).

1	Apart from changing the perception of targets' feelings and deservingness appraisal,
2	another form of reappraisal is to reconstruct views of the misfortune itself and come
3	to view it as a good thing (Zaki, 2014). When immoral persons suffer, people can
4	view the immoral persons' misfortune as a lesson to them, teaching them not to do
5	bad things in the future. Even if the immoral persons cannot receive or benefit from
6	the lesson, observers can be led to believe that doing bad things brings misfortune,
7	such that empathizers have fewer negative feelings about the misfortunes of immoral
8	targets.
9	In sum, through a reappraisal of the misfortunes of immoral targets (by
10	changing the perception of the targets' feelings, via a deservingness appraisal, or by
11	constructing a positive view), individuals can reduce their empathy towards immoral
12	targets. Each of the above processes (situation selection, attention modulation, and
13	reappraisal) can explain how empathy can be modulated. Some evidence supports the
14	attention-modulation and appraisal explanations, but more evidence is needed for the
15	situation-selection explanation.
16	The specific context might also influence the process by which empathy is
17	modulated. When individuals already have a stable impression of the moral character
18	of a target and can choose the situation themselves, their selective empathy might be
19	more likely to occur via situation selection. When individuals only know some
20	morally-related acts of a target, they might need more time to reappraise the target's
21	misfortune. In the course of gradually forming a stable impression of a target's
22	immoral character, empathy regulation might gradually change from reappraisal to

1	attention modulation and to situation selection. Finally, it remains unclear whether
2	different components of empathy are regulated in different ways (Weisz & Cikara,
3	2021), an issue that warrants further investigation.
4	A Mixed Pathway
5	Empathy modulation might not be necessary for the moral selectivity of
6	empathy. Individuals' reduced empathy towards antisocial targets might be the mixed
7	product of empathy and schadenfreude. Individuals show equal levels of empathy for
8	both prosocial and antisocial targets, but meanwhile they also feel happy (or more
9	specifically, schadenfreude) at the misfortune of antisocial targets. This mixture of
10	empathy and schadenfreude explains the outcomes of reduced empathy for antisocial
11	targets. This potential pathway is hard to verify based on current findings because
12	most studies only measured the outcomes of individuals' empathic responses, such as
13	asking them to report on their feelings after learning about the misfortunes of
14	antisocial or prosocial targets (Berndsen & Tiggemann, 2020; Brambilla & Riva, 2017;
15	Riva et al., 2016), without focusing on individuals' negative and positive responses at
16	the same time.
17	However, one observational study of children provides some suggestive
18	evidence for this pathway. Mendes et al. (2018) coded children's facial expressions

However, one observational study of children provides some suggestive
evidence for this pathway. Mendes et al. (2018) coded children's facial expressions
when watching the punishment of an antisocial puppet who tricked them and a
prosocial puppet who gave toys to them. Six-year-olds produced more smiles with

21 frowns when watching the antisocial puppet being hit than when watching the

22 prosocial puppet being hit. Children's frowns might reflect their empathic responses

1	towards the suffering of targets, while their smiles were presumably signs of
2	Schadenfreude. Their smiles with frowns suggest that they felt both empathic and
3	schadenfreude at the antisocial puppets' suffering, supporting the mixed route.
4	Overall, we have proposed three ways to explain how empathy becomes
5	morally selective. The first is that individuals automatically show less empathy for
6	antisocial targets than prosocial targets. The second is that individuals need to regulate
7	their empathy for targets with different moral characteristics via situation selection,
8	attention modulation, or reappraisal. The third is that selective empathy is a mixture
9	of empathy and schadenfreude. Each pathway has its supporting evidence. These three
10	pathways might apply to different situations or age groups. When the immoral targets
11	are extremely immoral (e.g., killer), individuals might show selective empathy
12	automatically with little regulation. When the immoral targets are not so evil but still
13	bad (e.g., people who take advantage of others), individuals might need to regulate
14	their empathy towards such immoral targets. For children whose abilities to integrate
15	their moral evaluation of targets and their empathy are still limited, their selective
16	empathy is more likely to be a mixed response of empathy and schadenfreude, such as
17	smiles with frowns (Mendes et al., 2018). Adults whose moral evaluation is well
18	developed and who can regulate their empathic responses are more likely to show
19	selective empathy automatically towards extremely immoral others or show selective
20	empathy via top-down regulations.



# **Future directions**

22 We provide the first comprehensive review of the influence of targets' moral

1	characteristics on empathy. The sections above draw together a number of hitherto
2	scattered studies on the moral selectivity of empathy and explain why and how
3	empathy becomes selective in response to the moral characteristics of targets. It
4	enriches our understanding of the functions of selective empathy and opens up several
5	avenues to further address the relation between empathy and morality.
6	The reverse influence of selective empathy on moral cognition
7	When reviewing the influence of targets' moral characteristics on empathy, we
8	mainly focused on situations where the targets' moral characteristics are easy to
9	identify and quite objective. However, moral judgments in daily life can be more
10	complicated than the situations in experimental studies. When the moral evaluation of
11	targets is uncertain, individuals' moral evaluation might be influenced by the states of
12	their empathy. For example, when people do not want to feel empathy, they might
13	project immorality onto a target, just to rationalize their feelings.
14	This reverse pathway from (lack of) empathy to moral cognition is apparent in
15	previous work on victim blaming (Johnson et al., 2002). For example, when a person
16	surfs the Internet and finds a news report that a girl was sexually assaulted at a party,
17	instead of empathizing with the girl, the person might comment that girls should pay
18	attention to their clothes at a party or that the girl behaved provocatively, thereby
19	implying that the victim was responsible for the sexual assault. Malicious comments
20	like this might be the product of failed empathy. When the person cannot empathize
21	with the victim, or feels that it would be burdensome to empathize, the person might
22	rationalize their callous reactions by evaluating the victim as immoral or negative. It

1	is conceivable that such unfeeling responses are more common in today's society. The
2	information explosion on the Internet, and more specifically, the explosion of reports
3	of suffering and brutality, might deplete people's empathic resources. To rationalize
4	their reduced empathy towards others' misfortunes, people may make inaccurate
5	inferences about the character of victims. More studies are needed to examine this
6	plausible reverse influence of selective empathy on moral cognition and to find ways
7	to avoid such rationalization of empathy depletion.
8	Such vilification of victims is similar to the process of dehumanization of victims
9	in contexts of moral disengagement. To feel less responsible for their immoral
10	behaviors, people tend to change how they view the victims of those behaviors
11	(Bandura et al., 1996, 1999). For example, when an army brutally executes enemy
12	civilians, they tend to view them as less than human, rather than as ordinary
13	individuals with feelings and families.
14	The moral selectivity of positive empathy
15	All the studies reviewed above focused on empathy for the misfortune of
16	others, but individuals can also share in the good fortune of others. Positive empathy
17	refers to the sharing and understanding of others' positive emotions (Morelli et al.,
18	2015). Different from negative empathy, it activates brain regions associated with
19	positive affect (e.g., ventromedial prefrontal cortex) (Morelli et al., 2014). Similar to
20	negative empathy, it also promotes prosocial behaviors (Morelli et al., 2015; Telle &
21	Pfister, 2016) and is modulated by many factors such as group membership, degree of
22	liking, and justice (Smith & van Dijk, 2018). Corresponding to Schadenfreude, there

1	is a concept called Gluckschmerz, which refers to pain at others' good fortune (Smith
2	& van Dijk, 2018). Both Schadenfreude and Gluckschmerz reflect counter-empathy
3	for others' experiences.
4	Several findings suggest that individuals' positive empathy also depends
5	selectively on targets' moral characteristics. For example, adults were found to
6	express less happiness and more anger towards an antisocial person's good fortune
7	than that of a prosocial person (Rodriguez-Gomez et al., 2020). Additionally, 4- to
8	9-year-old children tend to evaluate antisocial targets as less happy than prosocial
9	targets even when both antisocial and prosocial targets are described as having
10	similarly happy experiences (Yang et al., 2021). Indeed, positive empathy might be
11	more selective in terms of targets' moral characteristics than negative empathy.
12	Previous studies found that individuals would share the negative feelings of both
13	strangers and ingroup members, but only share the positive feelings of ingroup
14	members, implying that positive empathy is more sensitive to targets' group identity
15	(Molenberghs et al., 2014; Motomura et al., 2015).
16	The asymmetrical selectivity of positive and negative empathy might also
17	reflect individuals' biased responses to positive and negative information (i.e., a
18	negativity bias, for reviews, see Peeters & Czapinski, 1990; Rozin & Royzman, 2001).
19	More specifically, negative information is usually more salient than positive
20	information for individuals. Based on this logic, negative experiences of targets might
21	draw more attention from empathizers than positive experiences of targets. Given that
22	others' negative experiences can also be a danger signal (Schulz, 2017), empathic

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1	responses towards negative experiences may be less selective than towards positive
2	experiences because the negative experiences of others can signal potential danger no
3	matter whether they are moral or immoral. More research is needed to examine the
4	moral selectivity of positive empathy and compare the moral selectivity of empathy
5	for positive and negative events.

6 Finally, it is important to note that individuals' reduced empathy or counter-empathy towards the fortune of immoral others might also stem from, or be 7 mixed, with envy or jealousy. Envy refers to a painful feeling caused by the good 8 9 fortune of others, and usually results from social comparisons (Crusius et al., 2020). Immoral targets are usually perceived as inferior in morality. The good fortune of 10 immoral targets might provoke a sense of conflict, making individuals experience 11 12 greater envy towards the good fortunes of immoral as compared to moral targets. These varied feelings of envy might also influence the selectivity of positive empathy. 13 The Role of Selective Empathy in Selective Helping and Third-party Punishment 14 Previous studies of third-party punishment and selective helping found that 15 individuals were more likely to punish immoral others (e.g., Fehr & Gächter, 2002; 16 Jordan et al., 2014; Kenward & Östh, 2015; McAuliffe et al., 2015; Yudkin et al., 17 2019) or avoid helping immoral as compared to moral others, even though their own 18 benefits and wellbeing were not impacted by others' immoral behaviors (e.g., Dahl et 19 al., 2013; Malti et al., 2016; Vaish et al., 2010; Van de Vondervoort et al., 2018; 20 Wedekind & Milinski, 2000). Given the positive role of empathy in prosocial 21 behaviors (de Waal, 2008; Eisenberg, 2000; Hoffman, 2001), selective empathy may 22

1	be the emotional precursor of selective helping and third-party punishment. Previous
2	studies have found that children's Schadenfreude and compassion played a mediating
3	role between the targets' moral characteristics and children's willingness to help them
4	(Schindler et al., 2015; Schulz et al., 2013), thereby providing evidence for a
5	mediating pathway from selective empathy to selective helping.
6	Meanwhile, a change in empathy may not be the only explanation for
7	individuals' selective behaviors toward prosocial and antisocial others. Social norms
8	and inhibitory control abilities can also influence third-party punishment (Krueger &
9	Hoffman, 2016; Su et al., 2019). Nevertheless, selective empathy is likely to play a
10	key role in situations involving emotion expression, such as helping others in distress
11	or punishing others to make them feel pain.
12	Conclusion
12 13	<b>Conclusion</b> This paper has reviewed evidence for selective empathy based on targets'
12 13 14	<b>Conclusion</b> This paper has reviewed evidence for selective empathy based on targets' moral characteristics from the perspectives of three components of empathy
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12 13 14 15 16 17 18 19 20 21	Conclusion This paper has reviewed evidence for selective empathy based on targets' moral characteristics from the perspectives of three components of empathy (emotional arousal, perspective taking, and empathic concern). It then discussed why empathy is morally selective with both ultimate and proximate causes and how it becomes morally selective via three possible pathways. We also discussed the possible bi-directional relation between selective empathy and the moral evaluation of targets (which can explain victim blaming) and the possible role of morally selective empathy in selective prosociality. A graphic summary of our review can be seen in Figure 1.

1	can be biased and irrational, i.e., selective empathy based on racial or group bias (de
2	Vignemont & Singer, 2006; Decety, 2021; Han, 2018; Montalan et al., 2012).
3	However, by documenting the impact of moral considerations on empathy, this paper
4	highlights a more positive aspect of selective empathy, More generally, the paper
5	enriches our understanding of the relation between morality and empathy and should
6	inspire future research on the moral functions of empathy from new perspectives.
7	

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#### 1 Figure 1

2 The Relation Between Selective Empathy and Moral Evaluation



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