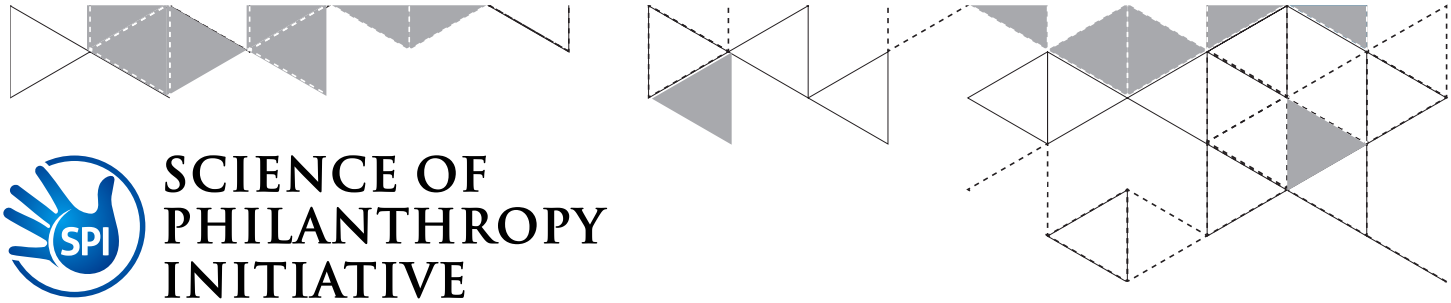

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The Complex Relation between Morality and Empathy

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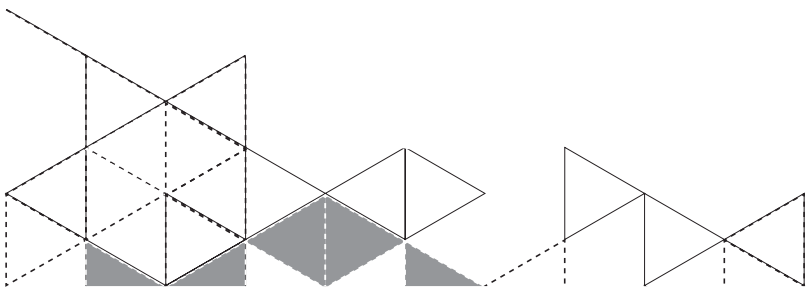

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The complex relation between morality and empathy

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Morality and empathy are fundamental components of human nature across cultures. However, the wealth of empirical findings from developmental, behavioral, and social neuroscience demonstrates a complex relation between morality and empathy. At times, empathy guides moral judgment, yet other times empathy can interfere with it. To better understand such relations, we propose abandoning the catchall term of empathy in favor of more precise concepts, such as emotional sharing, empathic concern, and affective perspective-taking.

Introduction

The concept of empathy has received an enormous amount of attention over the past decade. It has appeared increasingly often in the popular press, political campaigns, and in a range of fields, including business, medical practice, ethics, justice, and the law. A simple search on PubMed reveals a 300% growth in the number of scientific publications using the term 'empathy' during the past 10 years.

There is broad consensus that empathy is a fundamental component of our social and emotional lives. Indeed, empathy has a vital role in social interaction, from bonding between mother and child, to understanding others' feelings and subjective psychological states. Empathy-related processes are thought to motivate prosocial behavior (e.g., sharing, comforting, and helping) and caring for others, to inhibit aggression, and to provide the foundation for care-based morality.

However, empathy is not always a direct avenue to moral behavior, and this may come as a surprise to the reader. Indeed, at times, empathy can interfere with morality by introducing partiality, for instance by favoring in-group members. Empathy does provide the emotional fire and a push toward seeing a victim's suffering end, irrespective of its group membership and culturally determined dominance hierarchies. To better understand the relation between empathy and morality, we first briefly describe what each of the concepts encompasses.

Morality and empathy

Morality includes concepts such as justice, fairness, and rights, and comprises norms regarding how humans should treat one another. It is an evolved aspect of human nature because it contributes to fitness in shaping decisions and actions when living in complex social groups. Reinforcement of moral rules minimizes criminal behavior and social conflict, and moral norms provide safeguards against possible well-being or health infringements. Developmental studies provide empirical support for claims that human capacities for moral evaluation are rooted in basic systems that evolved in the context of cooperation necessary for communal living [1]. However, it would be misleading to see morality as a direct product of evolution. It is also a social institution and many moral codes redirect or even oppose our evolved tendencies, such as our inclination for nepotism.

Neuroscience work demonstrates that the brain regions underpinning morality share resources with circuits controlling other capacities, such as emotional saliency, mental state understanding, and decision-making, and involve the posterior superior temporal sulcus, amygdala, insula, ventromedial prefrontal cortex, dorsolateral prefrontal cortex, and medial prefrontal cortex (Figure 1). What has become clear is that these systems are not specific to morality, rather they support more general cognitive processing [2].

The ability to empathize has been defined in multiple ways using various criteria [3]. The number of competing conceptualizations circulating the literature has created a serious problem with the study of empathy by making it difficult to keep track of which process or mental state is being referring to in any given discussion. Keeping track is important because the different conceptualizations refer to distinct psychological phenomena. These phenomena vary in their function, biological mechanisms, and effects, particularly the relations between empathy and moral behavior.

Recent research in developmental and affective neuroscience suggests that empathy is a construct comprising several dissociable neurocognitive components (emotional, motivational, and cognitive), interacting and operating in parallel fashion. The emotional component of empathy involves the capacity to share or become affectively aroused by others' emotions (at least in valence, tone, and relative intensity). It is commonly referred to as emotion contagion, or affective resonance, and is independent of mindreading and perspective-taking capacities. The motivational component of empathy (empathic concern) corresponds to the urge to care for another's welfare. Finally, cognitive empathy is similar to the construct of affective perspective-taking. Each of these emotional, motivational, and cognitive facets of empathy can influence moral behavior in dramatically different ways.

Empathy is a limited resource

Given that empathy has evolved in the context of parental care and group living, it has some unfortunate features

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Box 1. Where morality and empathy meet in the brain

Support for a link between empathy and moral cognition is provided by studies demonstrating that low dispositional empathic concern predicts utilitarian moral judgment, regardless of situation (e.g., personal, impersonal) [12]. In a recent functional neuroimaging study examining the neural basis of indifference to harm while participants were engaged in moral dilemmas, a tendency toward counterintuitive impersonal utilitarian judgment was associated both with 'psychoticism' (or psychopathy), a trait linked with a lack of empathic concern and antisocial tendencies, and with 'need for cognition,' a trait reflecting preference for effortful cognition [13]. Importantly, only psychoticism was also negatively correlated with activation in the vmPFC. Lesions of this region have consistently been associated with increased utilitarian choices in highly conflicting moral dilemmas, opting to sacrifice one person's life to save several other individuals [2].

When humans witness others being harmed, neural response is detected in regions involved in understanding intentions [posterior superior temporal sulcus (pSTS) and medial PFC (mPFC)] and empathic concern (vmPFC). In one such study, participants were shown video clips depicting interpersonal harm [14]. In all scenarios, one individual was either intentionally or accidentally hurting another person. Perceiving intentional harm versus accidental harm was specifically associated with increased signal in the vmPFC and right pSTS. Finally, the lack of empathic concern is a hallmark characteristic of psychopathy and, in these individuals, is associated with callous disregard for the well-being of others coupled with an inability to experience remorse or guilt. One recent study conducted with a forensic population showed psychopaths pictures of physical pain and asked them to imagine how another person would feel in these scenarios. Psychopaths showed no activation of the vmPFC when imagining the pain of another [15]. Thus, converging evidence from functional neuroimaging, lesion studies, and studies with psychopaths suggests that the vmPFC is a critical hub for both moral behavior and empathic concern.

that can be seen very early during development. Children do not display empathic concern toward all people equally. Instead, they show bias toward individuals and members of groups with which they identify. For instance, young children of 2 years of age display more concern-related behaviors toward their mother than toward unfamiliar people [4]. Moreover, children (aged 3–9 years) view social categories as marking patterns of interpersonal obligations. They view people as responsible only to their own group members, and consider within-group harm as wrong regardless of explicit rules, but they view the wrongness of between-group harm as contingent on the presence of such rules [5]. Additionally, neuroimaging studies revealed that the neural network implicated in empathy for the distress and the pain of others can be either strengthened or weakened by interpersonal variables, implicit attitudes, and group preferences. Neural activity in this network is significantly enhanced when individuals view their loved-ones in pain compared with strangers [6].

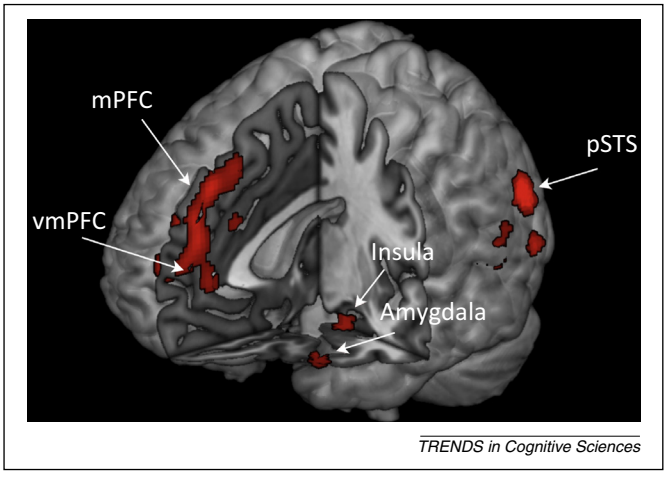

Figure 1. Neural regions involved in moral cognition and empathic concern. Abbreviations: mPFC, medial prefrontal cortex; pSTS, posterior superior temporal sulcus; vmPFC, ventromedial prefrontal cortex. Adapted from [14].

Interestingly, the motivation to care for others is both deeply rooted in our biology and is still very flexible. Humans can feel empathic concern for a wide range of 'others', including for nonhuman animals, such as pets (in the Western culture) or tamagotchi (in Japan). This is especially the case when signs of vulnerability and need are noticeable. In support of this, neural regions involved in perceiving the distress of other humans, such as the anterior cingulate cortex and insula, are similarly activated when witnessing the distress of domesticated animals [7].

Importantly, both empathic concern and moral reasoning require involvement of the ventromedial prefrontal cortex (vmPFC). The vmPFC is reciprocally connected with ancient emotional systems in brainstem, amygdala, and hypothalamus, and bridges conceptual and emotional processes (Box 1). This region, across mammalian species, is a critical hub for caregiving behavior, particularly parenting through reward-based and emotional associations [8]. Thus, care-based morality piggybacks on older evolutionary motivational mechanisms associated with parental care. This explains why 'empathy' is not always the royal road to morality and can at times be a source of immoral action by favoring self- or kin-related interest.

Affective perspective-taking and morality

Humans are arguably unique, not in their empathic concern and emotional sharing, but in that they can adopt the perspective of another, which can lead to expanding the circle of care from the tribe to all humanity. A substantial body of behavioral studies has documented that affective perspective-taking is a powerful way to elicit empathic concern for others, and reduce partiality toward one's social group. This perspective-taking can be elicited explicitly or implicitly. For instance, explicitly adopting the perspective of an out-group member leads to a decrease in the use of stereotypes for that individual, and to more positive evaluations of that group as a whole. Assuming the perspective of another (such as being in a wheelchair) brings about changes in the way we see them, and these changes generalize to people similar to them, notably members of the same social groups to which they belong [9].

The experience of reading fiction has been proposed as an implicit way to engage in affective perspective-taking. Pinker [10] argued that the increase of literacy during the humanitarian revolution during the 18th century contributed to the expanding of empathy to humanity. In works of fiction, the story unfolds in a character's own words, exposing the character's thoughts and feelings in real time rather than describing them from the distancing perspective of a disembodied narrator. Research indeed demonstrates that reading fiction improves the capacity to identify and understand others' subjective emotional and

mental states, including empathic concern [11]. Beyond reading, language, the arts, and the media also provide rich cultural input. This is processed both by internal simulation and flexible cognitive resources implemented in the prefrontal cortex, which may elicit concern and caring for others. Thus, affective perspective-taking can be a powerful enzyme that can bridge morality and empathic concern.

Concluding remarks

There is no reason to see empathy and morality as either systematically opposed to one another, or inevitably complementary. It has been argued that moral progress involves expanding our concern from the family to humanity as a whole. Yet, it is difficult to feel the same concern toward someone who one has never met as one feels for one's own child or a lover. Nonetheless, over the course of history, humans have created social structures for upholding moral principles to all humanity, such as human rights and the International Criminal Court. Clearly, we value and can act prosocially toward strangers and extend concern beyond kin or kith. Understanding the complex relation between morality and the construct of 'empathy' may require abandoning the use of the catchall term 'empathy' in favor of more precise concepts (i.e., emotional sharing, empathic concern, and affective perspective-taking). This will prevent academic and popular confusion between 'empathy' and morality and pave the way to a better theoretical framework for further investigations.

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