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The Prosocial Brain:How Helping Others May Support the Helper's Well-Being

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Abstract
Helping another person is usually described as a moral or social act. Neuroscience adds a less obvious possibility: under some conditions, helping may also alter the helper's own affective and physiological state. This narrative review examines the emerging neurobiological literature on prosocial behavior, with particular attention to reward valuation, empathy and mentalizing, caregiving-related processes, threat regulation, social connection, and autonomic–immune pathways. Rather than treating altruism as a single brain function, the article argues for a network perspective in which prosocial action recruits partially overlapping systems for representing another person's state, assigning value to possible actions, selecting a response, and learning from its consequences. Recent reviews suggest that helping can engage reward-related and caregiving processes while potentially buffering threat and supporting social connectedness; however, effects depend on context, voluntariness, cost, relationship, individual differences, and the form of helping. The article proposes the CARE model—Connect, Appraise, Respond, Encode—as a cautious conceptual framework for organizing these mechanisms without claiming a dedicated "altruism center" in the brain. It also distinguishes healthy prosociality from compulsive self-sacrifice and discusses implications for neuroscience, prevention, organizations, and future longitudinal and experimental research. The central conclusion is deliberately modest: helping others is not a neurological prescription for happiness, but prosocial behavior may constitute one biologically meaningful route through which social connection, reward, stress regulation, and well-being interact.

Keywords: prosocial behavior; altruism; social neuroscience; reward; empathy; caregiving; stress regulation; well-being; social connection; psychoneuroimmunology

1. Introduction: the overlooked direction of helping

When one person helps another, attention naturally goes to the recipient. Did the intervention reduce distress? Was a need met? Was the other person safer, calmer, or better resourced? The helper is usually treated as the active side of the equation and the recipient as the beneficiary.

Yet human social behavior is rarely one-directional. A supportive act changes an interaction, and the interaction can change both people. The helper perceives another person's state, evaluates whether and how to intervene, anticipates consequences, acts, observes the response, and learns from the outcome. Each of these steps can involve neural and physiological processes relevant to the helper's own emotional state.

This observation should not be converted into the simplistic slogan that "helping is good for the brain." Prosocial behavior is heterogeneous. Donating money anonymously, comforting a distressed child, helping a colleague, caring for a chronically ill relative, and risking one's safety for a stranger are not biologically or psychologically equivalent. The costs, motives, social meanings, and consequences differ.

The scientifically useful question is therefore narrower: what neural and physiological mechanisms could explain why some forms of voluntary prosocial behavior are associated with positive affect, social connection, stress buffering, and health-related outcomes in the helper?

This article reviews that question and proposes a conceptual model for future research. It is intentionally distinct from clinical claims. Prosocial action is not presented as a treatment for neurological or psychiatric disease, nor is a single neural signature assumed to explain moral behavior.

2. Prosociality is a process, not a brain region

Contemporary social neuroscience increasingly describes prosocial behavior as the product of interacting systems rather than a unitary faculty. A large neuroimaging meta-analysis reported only partial overlap between prosocial behavior, mentalizing, and empathy networks, while also identifying preferential involvement of dorsolateral and ventromedial prefrontal regions in prosocial tasks. This supports a multidimensional account in which understanding another person is necessary in many situations but is not identical to deciding to help. [1–4,15]

Cross-species and human reviews likewise implicate distributed circuitry involving the anterior cingulate cortex, amygdala, prefrontal regions, insula, striatal and reward-related systems, and neuromodulatory influences including oxytocin, dopamine, and serotonin. The exact contribution of each component varies with task and species, making it inappropriate to speak of an isolated "altruism center." [1–4]

A useful distinction is between at least four functions: representing another person's state; appraising the value, cost, and relevance of possible actions; selecting and executing a response; and updating future behavior from the social outcome. Prosociality emerges from coordination across these functions.

3. Reward without reducing altruism to self-interest

One of the most intriguing findings in the field is that benefiting another person can recruit neural systems involved in valuation and reward. This does not prove that every generous act is secretly selfish. A brain can register an action as valuable after the action was motivated by concern for another person. Motivation and experienced reward are related but not interchangeable. [4,15]

The possibility of intrinsic reinforcement is nevertheless important. If a prosocial act produces positive affect, perceived meaning, social approval, or relief from another person's distress, those consequences can increase the probability of similar future behavior. In this sense, prosociality can become self-reinforcing without ceasing to be other-oriented.

Recent neuroscience reviews of the benefits of helping emphasize reward-related and caregiving systems as plausible mechanisms linking prosocial behavior to the helper's psychological and physical well-being. The evidence is promising, but the causal chain remains incompletely specified and should not be overstated. [7,8,17,18]

4. Empathy, mentalizing, and the decision to act

Feeling another person's distress is not the same as helping them. Empathic resonance may motivate care, but it can also produce personal distress, withdrawal, or emotional overload. Mentalizing—the capacity to infer another person's beliefs, intentions, and needs—can improve the fit between the help offered and the help actually required. [1,4,15]

Neuroimaging evidence suggests that prosocial decisions draw on, but are not reducible to, classic empathy and mentalizing systems. Evaluation and action planning appear to be central additions. This matters practically: effective helping requires more than emotional contagion. It requires transforming social information into an appropriate behavioral choice. [15]

The distinction also helps explain why high empathy does not automatically generate healthy prosociality. Without regulation, boundaries, and accurate appraisal, the same sensitivity that facilitates care can contribute to exhaustion.

5. Caregiving, safety, and threat regulation

A particularly compelling hypothesis is that helping can activate aspects of mammalian caregiving biology. Caregiving systems evolved to support protection, affiliation, and sustained attention to vulnerable others. In humans, their activation may intersect with reward and threat-regulation mechanisms. [7,8,17,18]

Recent syntheses propose that prosocial behavior may dampen threat responses while reinforcing caregiving-related action. If this account is correct, helping may sometimes benefit the helper not because stress disappears, but because the social meaning of the situation changes—from passive exposure to another's suffering toward purposeful, socially connected action. [7,8,17,18]

This possibility is especially relevant to well-being research. Perceived social safety and connection can shape autonomic and endocrine responses. However, the effect is unlikely to be universal. Helping performed under coercion, chronic overload, exploitation, or impossible responsibility may amplify rather than buffer stress.

6. From social connection to psychoneuroimmunology

The biological consequences of social life extend beyond the brain. Psychoneuroimmunology research has examined pathways linking social environments to autonomic, endocrine, inflammatory, and immune processes. Recent work contrasts the adverse effects of loneliness and social adversity with the potential benefits of social support and prosocial engagement. [10,16]

Proposed mechanisms include vagal regulation, oxytocin-related pathways, and reward processes, but many links remain mechanistic hypotheses rather than settled causal facts. The important conceptual point is that a prosocial act is simultaneously behavioral and relational. It can alter perceived connectedness, agency, and social safety, all of which may influence downstream physiology. [10,16]

This is a promising area for interdisciplinary research because it moves the question beyond whether helping "feels good" toward whether repeated patterns of adaptive social engagement have measurable biological correlates over time.

7. The CARE model

To organize the literature without implying a single neural pathway, this article proposes the CARE model. CARE is not a clinical protocol and has not yet been empirically validated as an integrated sequence. It is a conceptual map designed to generate testable hypotheses.

Stage	Core question	Candidate processes	Possible helper outcome
C — Connect	What is happening to the other person?	Social perception, empathy, mentalizing, salience	Attention shifts toward socially meaningful information
A — Appraise	Can and should I act, and at what cost?	Valuation, executive control, context, norms, anticipated outcomes	Agency and purposeful choice
R — Respond	What helpful action is appropriate?	Action selection, caregiving, motor and autonomic coordination	Prosocial behavior; possible reduction of helplessness
E — Encode	What did this action mean and what followed?	Reward learning, memory, social feedback, self-relevance	Reinforcement, meaning, connectedness, future prosocial tendency

7.1 Connect

The sequence begins with detection. Another person's need must become sufficiently salient to enter attention. Connection includes perceptual cues, contextual interpretation, empathic resonance, and perspective-taking. Importantly, the helper's representation can be inaccurate; prosocial intention does not guarantee that the perceived need is real or correctly understood.

7.2 Appraise

The potential helper evaluates urgency, personal capacity, social norms, expected benefit, risk, and cost. Valuation is therefore not a moral defect but a necessary component of adaptive helping. An individual who cannot assess cost may engage in unsustainable self-sacrifice.

7.3 Respond

A prosocial intention becomes biologically and socially consequential only when translated into action. The response can be material, emotional, informational, protective, or relational. Appropriate helping is context-sensitive: sometimes the most prosocial response is intervention; sometimes it is listening; sometimes it is respecting autonomy.

7.4 Encode

After acting, the helper encounters consequences. Did the action work? Was it appreciated? Did it increase connection or create conflict? Was the cost manageable? Reward, memory, and social feedback can update future choices. This learning stage may help explain why repeated voluntary helping can become part of a stable prosocial orientation.

8. Why the helper may benefit

The CARE model suggests several non-exclusive routes through which prosocial action could support well-being. First, successful helping may generate reward and positive affect. Second, it can increase perceived social connection. Third, purposeful action can replace passive helplessness with agency. Fourth, caregiving-related processes may interact with threat regulation. Fifth, repeated prosocial experiences can contribute to a coherent sense that one's actions matter to other people.

These routes should be treated as moderators and mediators to be tested, not as guaranteed effects. The same act can be nourishing in one context and depleting in another.

9. The boundary condition: when helping hurts

Any credible neuroscience of prosociality must account for the costs of care. Caregiver burden, compassion fatigue, role captivity, chronic responsibility, and exploitation demonstrate that helping is not inherently health-promoting.

Voluntariness may be a crucial moderator. So may perceived efficacy, reciprocity, relational closeness, available resources, duration, and the possibility of recovery. Helping that repeatedly exceeds a person's physical, emotional, or financial capacity can become biologically stressful even when morally admirable.

This distinction prevents a dangerous interpretation of the literature. People who are exhausted by caregiving should not be told that they simply need to help more. A prosocial neuroscience must include boundaries as part of adaptive social behavior.

10. Implications for organizations and communities

The neuroscience of prosociality has implications beyond laboratories. Organizations often promote collaboration, generosity, mentoring, and service as cultural values. If these behaviors are to support rather than erode well-being, systems must make helping feasible and voluntary enough to remain sustainable.

A healthy prosocial culture is not one in which the most conscientious people continually absorb everyone else's workload. It is one in which cooperation, recognition, reciprocity, psychological safety, and boundaries coexist.

This perspective also invites a shift in well-being programs. Rather than focusing exclusively on individual self-care, interventions could examine structured opportunities for meaningful contribution and social connection while carefully monitoring burden and inequity.

11. Research agenda

Several questions deserve direct testing. Longitudinal studies should examine whether repeated voluntary prosocial behavior predicts changes in well-being through reward, social connection, or stress-buffering pathways. Experimental studies should compare forms of helping that differ in cost, voluntariness, visibility, relationship, and recipient response.

Multimodal designs combining fMRI or fNIRS with autonomic measures, ecological momentary assessment, inflammatory markers, and behavioral follow-up could clarify how laboratory signals translate into everyday life. Research should also distinguish helping motivated by compassion from helping driven by guilt, fear of rejection, status seeking, or coercion.

Finally, individual differences matter. Age, culture, attachment, socioeconomic resources, prior adversity, neurodiversity, and caregiving history may alter both the likelihood of helping and its consequences for the helper.

12. Limitations

This is a narrative and conceptual review rather than a systematic review or meta-analysis. The literature combines human and animal studies, diverse operational definitions of prosociality, and heterogeneous neuroimaging and physiological methods. Neural activation should not be interpreted as proof of a specific psychological state, and associations between helping and health do not establish that helping caused the observed benefit.

The CARE model is therefore offered as a heuristic framework. Its value will depend on whether its stages and proposed pathways can be operationalized, falsified, and improved through empirical research.

13. Conclusion

Helping another person is not only a social event. It is also a decision, an action, a learning episode, and sometimes a biologically meaningful experience for the helper.

Current evidence supports a distributed view of prosociality involving social perception, empathy and mentalizing, valuation, action planning, reward, caregiving, and regulatory processes. Emerging work further suggests plausible links to stress buffering, social connection, and health-related physiology.

The most responsible conclusion is not that altruism is medicine. It is that human brains and bodies evolved in profoundly social environments, and actions that genuinely connect us to the welfare of others can interact with systems that also shape our own well-being.

The scientific challenge now is to identify when, for whom, and through which mechanisms helping becomes mutually beneficial—and when care crosses the line into unsustainable self-sacrifice.

14. From moral intuition to neural computation

Prosocial behavior is often discussed in moral language: generosity, compassion, solidarity, service, sacrifice. Neuroscience does not replace that vocabulary, but it can clarify the computations that make such behavior

possible. Before a person helps, the nervous system must detect socially relevant information, distinguish another person's state from one's own, estimate possible outcomes, integrate costs and benefits, and select an action. This sequence is neither purely emotional nor purely rational.

A large coordinate-based meta-analysis of hundreds of neuroimaging studies showed that prosocial behavior only partially overlaps with canonical empathy and mentalizing networks. Prosocial decisions also recruit regions associated with evaluation and action planning. This corrects the popular assumption that empathy automatically produces kindness. Feeling another person's pain and deciding what to do about it are related but separable processes. [15]

This distinction has practical relevance. Excessive empathic resonance without regulatory capacity can become distressing. Conversely, effective helping can arise through perspective-taking and deliberate action even when emotional resonance is modest. A mature account of prosociality therefore needs coordination among affect, cognition, valuation, and behavior.

15. Reward circuitry and the paradox of generous pleasure

One of the most provocative findings in social neuroscience is that giving can be rewarding to the giver. Charitable donation, resource allocation, and support-giving have implicated valuation-related regions including the ventral striatum and ventromedial prefrontal cortex. These observations are sometimes misinterpreted as evidence that altruism is merely disguised selfishness. That conclusion does not follow. [7,8,15,17,18]

Neural reward is a mechanism of learning and valuation, not a moral verdict. If helping another person is encoded as valuable, the resulting positive affect may reinforce future helping. Evolutionarily, such reinforcement is compatible with the maintenance of cooperation and caregiving in highly social species.

The critical variables are likely to include voluntariness, perceived effectiveness, social meaning, and cost. A freely chosen act that visibly benefits another person may generate a very different experience from compulsory care performed under exhaustion.

16. Stress buffering: helping as active social regulation

Stress is not determined only by objective difficulty. Perceived control, predictability, social safety, and available resources influence the organism's response. Prosocial action may alter several of these dimensions simultaneously. When a person moves from witnessing distress to taking effective action, the situation can acquire a different psychological meaning.

Recent neuroscience reviews propose that caregiving-related systems may contribute to stress buffering. Reward-related and caregiving processes can interact with threat-responsive systems, while affiliative biology may support calmer social states. These mechanisms remain under active investigation, and causal claims require caution. [7,8,17,18]

Helping is not inherently calming. Emergency workers, family caregivers, clinicians, teachers, and humanitarian workers can experience chronic physiological and emotional load precisely because they help repeatedly. The relevant hypothesis is conditional: effective, voluntary, bounded prosocial action may support regulation, whereas chronic uncontrollable caregiving may increase allostatic burden.

17. Oxytocin, affiliation, and the danger of simple stories

Oxytocin is frequently described in popular culture as a 'love hormone'. Such labels are scientifically inadequate. Oxytocin participates in social and physiological regulation, but its effects are context-dependent and influenced by relationship, expectation, threat, sex, prior experience, and other variables. [1,3]

In prosocial contexts, oxytocin-related pathways are of interest because caregiving and social affiliation can involve hypothalamic and autonomic mechanisms. However, no responsible model should claim that helping simply releases oxytocin and therefore makes people healthier.

The value of this literature lies instead in showing that social behavior can be biologically embodied. Interpersonal experiences are not external to physiology; they can become part of the regulatory environment in which the brain and body operate.

18. Autonomic regulation and the social body

Prosocial behavior is enacted by a body, not by an isolated brain. Heart rate, respiration, vascular responses, endocrine signaling, and immune activity can all change during social interaction. This broader perspective is particularly important when discussing well-being.

Psychoneuroimmunology provides a framework for understanding bidirectional relationships among social experience, neural processes, endocrine regulation, and immunity. Recent work highlights possible vagal, oxytocin-related, and reward pathways while also emphasizing that causal evidence remains incomplete. [10,16]

The implication is methodological as much as theoretical. Future studies of helping should combine neural imaging with heart-rate variability, cortisol, inflammatory markers, ambulatory physiology, and ecological measures to determine whether laboratory effects persist in daily life.

19. Prosociality, loneliness, and social connection

Loneliness is not simply the absence of people. It is a perceived deficit in meaningful social connection. A person can be surrounded by others and remain lonely, while another can spend substantial time alone without experiencing social disconnection.

Helping may influence loneliness through a mechanism different from passive social exposure. Prosocial action gives the individual a socially meaningful role. The person is not merely present in a network but becomes consequential within it. This can generate reciprocity, belonging, recognition, and interpersonal usefulness.

Yet interventions must avoid instrumentalizing vulnerable people. Encouraging contribution can be empowering when voluntary and supported; it can be burdensome when framed as an obligation or simplistic cure.

20. Purpose, meaning, and the neural value of contribution

Human well-being is not exhausted by pleasure. People frequently tolerate effort, discomfort, and delayed reward when an activity feels meaningful. Prosocial behavior can provide a direct form of meaning because the consequences of action are located in another human being.

Meaning may influence persistence by altering valuation. An effort that appears costly in isolation can be experienced differently when connected to a valued person, community, or cause. This does not imply the existence of a single 'purpose circuit'. Purpose is better understood as a higher-order organization of goals, identity, memory, and value.

The defensible neuroscientific claim is therefore that meaningful prosocial goals may modulate distributed systems involved in motivation, valuation, social cognition, and self-relevance.

21. The dark side of prosociality

A strong theory is defined partly by the cases it does not explain. If helping were universally beneficial, caregivers would never burn out, clinicians would never experience compassion fatigue, and generous individuals would never be exploited. Reality contradicts such a model.

Prosocial behavior can become maladaptive when driven by fear, guilt, compulsive approval-seeking, inability to set limits, coercive norms, or chronic exposure to others' suffering. The helper may sacrifice sleep, financial security, recovery time, or personal relationships.

This suggests a non-compensation principle: the moral value of an action does not cancel its physiological cost. Sustainable prosociality requires resources, boundaries, recovery, and the possibility of saying no.

22. Individual differences and neurodiversity

Not all individuals process social cues in the same way. Personality, attachment history, developmental experience, culture, trauma exposure, age, socioeconomic security, and neurodiversity can influence both prosocial motivation and the experience of helping.

Some individuals may rely more strongly on explicit cognitive perspective-taking; others may experience intense affective resonance. Some may find direct interpersonal helping rewarding, while others may prefer structured, indirect, or task-based contribution.

Future studies should treat heterogeneity as a central research question rather than statistical noise. The goal is not to identify a single ideal prosocial brain but to understand multiple pathways through which people can contribute while preserving their own functioning.

23. Development across the lifespan

Prosocial behavior emerges early but changes in form and complexity across development. Children learn to share, comfort, cooperate, and respond to social norms while neural systems supporting executive control, perspective-taking, and valuation continue to mature.

Adolescence is especially relevant because sensitivity to peer evaluation and social reward changes during this period. In later life, contribution to younger generations, volunteering, mentoring, and caregiving can become important sources of social role and meaning.

A lifespan neuroscience of prosociality could distinguish universal mechanisms from age-specific expressions and clarify whether repeated helping experiences shape later social cognition.

24. Culture and the social meaning of helping

Neural mechanisms operate within cultural worlds. What counts as appropriate helping, who deserves assistance, whether generosity should be public or private, and how reciprocity is understood vary across communities.

Culture can influence attention, norms, self-construal, perceived obligation, and reward. A behavior experienced as freely chosen in one context may be experienced as mandatory in another. Identical outward acts may therefore carry different internal meanings.

Cross-cultural neuroscience is essential if the field wishes to make general claims. Samples drawn disproportionately from affluent Western populations cannot by themselves establish universal mechanisms of human helping.

25. Clinical relevance without turning prosociality into treatment

Prosocial deficits or alterations are relevant to several psychiatric and neurological conditions, and recent reviews have highlighted the clinical importance of understanding helping and comforting behavior. Translating this literature into intervention nevertheless requires restraint. [3,5,6]

Prosocial activity should not be prescribed as a substitute for evidence-based treatment of depression, anxiety, neurocognitive disease, or other clinical conditions. Nor should patients be made responsible for improving their health by becoming more generous.

A more defensible research question is whether appropriately designed prosocial activities can serve as adjunctive components in selected prevention or rehabilitation contexts, and for whom. This requires controlled trials and safety monitoring.

26. Methodological challenges

Laboratory paradigms necessarily simplify social life. Monetary allocation tasks offer experimental control but may not capture the emotional complexity of comforting a grieving friend. Cross-species paradigms provide mechanistic insight but cannot be directly equated with human moral reasoning. [4,15]

Another challenge is temporal scale. A brain response lasting seconds during a donation task cannot by itself demonstrate long-term improvement in health. Credible pathways require connecting immediate neural responses with repeated real-world behavior and longitudinal outcomes.

Publication bias, heterogeneous definitions, and analytic flexibility further complicate interpretation. Preregistration, multisite replication, transparent analysis, and convergent multimodal measurement would strengthen the field.

27. A testable expansion of the CARE model

The CARE model can generate falsifiable predictions. During Connect, measures of salience, empathy, and mentalizing should predict accurate detection of need but not necessarily action. During Appraise, valuation and executive processes should be sensitive to cost, efficacy, norms, and voluntariness. During Respond, behavioral and autonomic measures should capture the transition from intention to action. During Encode, reward and memory signals should predict whether helping is repeated.

A critical prediction is that health-related consequences will be moderated by perceived voluntariness and effectiveness. Helping that is freely chosen and perceived as useful should be more likely to produce positive affect and social connection than helping experienced as coercive or futile.

A second prediction is that the relationship between prosocial behavior and well-being will be nonlinear. Too little social contribution may be associated with disconnection for some individuals, while excessive helping without recovery may produce burden.

28. Proposed empirical program

A first study could use a randomized design comparing voluntary helping, compulsory helping, and a neutral control task. Behavioral outcomes could be combined with fMRI measures of valuation and threat, heart-rate variability, and salivary cortisol. The primary hypothesis would concern the interaction between helping and perceived autonomy.

A second study could follow participants for six to twelve months using ecological momentary assessment. Participants would report daily helping episodes, motive, cost, relationship to recipient, perceived effectiveness, affect before and after helping, and recovery. Wearable measures could provide complementary autonomic data.

A third line of work could compare direct interpersonal helping with anonymous or digital prosocial behavior. This would test whether social connection is necessary for helper benefit or whether perceived contribution alone can activate relevant pathways.

29. Implications for leadership and organizational design

Organizations frequently celebrate helping while structurally rewarding individual performance. This contradiction can turn prosociality into invisible labor. Employees who mentor, support colleagues, absorb emotional demands, and repair team relationships may contribute substantially while receiving little formal recognition.

A neuroscience-informed perspective does not justify manipulating employees into helping because it might make them feel better. Instead, it highlights autonomy, reciprocity, recognition, manageable load, and social safety.

Leadership shapes the meaning of helping. When leaders model reciprocal support and protect boundaries, contribution can reinforce belonging. When leaders exploit conscientious employees, the same outward behavior may become a source of chronic stress.

30. Ethical implications

If helping is associated with well-being, institutions may be tempted to promote it as a low-cost health intervention. This risks shifting responsibility from systems to individuals.

Prosociality should remain genuinely prosocial. The recipient's welfare cannot become merely an instrument for improving the helper's biomarkers. Vulnerable populations should not be used as therapeutic opportunities for more privileged participants.

The ethical standard should include dual benefit, informed participation, respect for autonomy, and attention to power. Neuroscience can illuminate mechanisms, but it cannot decide the moral legitimacy of an intervention.

31. Integrative discussion

The evidence supports a view of prosocial behavior as a dynamic social-neurobiological process. Helping begins with another person, but its consequences can return to the helper through reward, learning, connection, agency, caregiving-related regulation, and embodied social physiology.

No single mechanism is sufficient. Reward without empathy could support strategic generosity. Empathy without regulation could produce distress. Social connection without autonomy could become obligation. Purpose without boundaries could become self-erasure. The relevant unit of analysis is therefore the configuration of processes and context.

The CARE framework is deliberately simple at the surface and plural underneath. Connect, Appraise, Respond, and Encode describe functional stages, not fixed anatomical modules. Each stage can be implemented through multiple neural and psychological mechanisms.

The strongest future contribution of this field may be to replace the binary question 'Is helping good for us?' with a more precise one: under what neural, relational, motivational, and contextual conditions does helping another person become a sustainable source of connection and well-being for the helper as well?

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Conflict of Interest

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Data Availability

No original dataset was generated or analyzed.

Author Contributions

Ignacio Bonasa Alzuria conceived the article, developed the CARE conceptual framework, synthesized the literature, and prepared the manuscript.

Author Note on Originality and Scope

This manuscript is an original conceptual synthesis written for submission as a review/conceptual article. It does not present fabricated participants, experiments, clinical outcomes, or datasets. The CARE framework is proposed here as a conceptual heuristic and should not be represented as an empirically validated clinical intervention.

References

1. Wu YE, Hong W. Neural basis of prosocial behavior. Trends Neurosci. 2022;45(10):749–762. doi:10.1016/j.tins.2022.06.008.
2. Walsh JJ, Christoffel DJ, Wu X, Pomrenze MB, Malenka RC. Dissecting neural mechanisms of prosocial behaviors. Curr Opin Neurobiol. 2021;68:9–14. doi:10.1016/j.conb.2020.11.006.
3. Walsh JJ, Christoffel DJ, Malenka RC. Neural circuits regulating prosocial behaviors. Neuropsychopharmacology. 2023;48(1):79–89. doi:10.1038/s41386-022-01348-8.
4. Wyss AM, Knoch D. Neuroscientific approaches to study prosociality. Curr Opin Psychol. 2022;44:38–43. doi:10.1016/j.copsyc.2021.08.028.
5. Rigney N, Hong W. Prosocial Helping Behavior: Conceptual Issues and Neural Mechanisms. Biol Psychiatry. 2025;97(10):961–970. doi:10.1016/j.biopsych.2025.03.003.
6. Zhang M, Rigney N, Chang SWC, Hong W. The Anterior Cingulate Cortex and Prosocial Behavior toward Others in Negative State. J Neurosci. 2026. doi:10.1523/JNEUROSCI.1105-25.2025.

7. Kim MJ, Sul S. How helping others helps us: neural mechanisms linking prosocial behavior to psychological and physical wellbeing. Front Hum Neurosci. 2026;20:1686801. doi:10.3389/fnhum.2026.1686801.
8. Eisenberger NI, Noble R, Naclerio M. The Benefits of Prosocial Behavior for Mental and Physical Health: A Neuroscience Approach. Curr Dir Psychol Sci. 2026. doi:10.1177/09637214261459027.
9. The neurophysiological correlates of altruism: A scoping review of fMRI, EEG, and autonomic studies. Cogn Affect Behav Neurosci. 2025. doi:10.3758/s13415-025-01380-3.
10. The beneficial effects of social support and prosocial behavior on immunity and health: A psychoneuroimmunology perspective. Brain Behav Immun Health. 2024;36:100758. doi:10.1016/j.bbih.2024.100758.
11. Menon V. 20 years of the default mode network: A review and synthesis. Neuron. 2023;111. doi:10.1016/j.neuron.2023.04.023.
12. Fivush R, Habermas T, Waters TEA, Zaman W. The making of autobiographical memory: intersections of culture, narratives and identity. Int J Psychol. 2011;46(5):321–345. doi:10.1080/00207594.2011.596541.
13. Singer JA, Blagov P, Berry M, Oost KM. Self-defining memories, scripts, and the life story: narrative identity in personality and psychotherapy. J Pers. 2013;81(6):569–582. doi:10.1111/jopy.12005.
14. Wilson AE, Ross M. The identity function of autobiographical memory: time is on our side. Memory. 2003;11(2):137–149. doi:10.1080/741938210.
15. Bellucci G, Camilleri JA, Eickhoff SB, Krueger F. Neural signatures of prosocial behaviors. Neurosci Biobehav Rev. 2020;118:186–195. doi:10.1016/j.neubiorev.2020.07.006.
16. Trachtenberg E. The beneficial effects of social support and prosocial behavior on immunity and health: A psychoneuroimmunology perspective. Brain Behav Immun Health. 2024;37:100758. doi:10.1016/j.bbih.2024.100758.
17. Kim MJ, Sul S. How helping others helps us: neural mechanisms linking prosocial behavior to psychological and physical wellbeing. Front Hum Neurosci. 2026;20:1686801. doi:10.3389/fnhum.2026.1686801.
18. Eisenberger NI, Noble R, Naclerio M. The Benefits of Prosocial Behavior for Mental and Physical Health: A Neuroscience Approach. Curr Dir Psychol Sci. 2026. doi:10.1177/09637214261459027.

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