The Concept of Gratitude to the Buddha (Buddhānussati) and the Science of Gratitude

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Abstract

This article examines Buddhānussati (recollection of the Buddha) as a contemplative form of gratitude and proposes an interdisciplinary framework for interpreting its personal and social significance. Rather than treating Buddhānussati as a merely devotional act, the article argues that it functions as a disciplined recollective practice through which attention, emotion, and ethical orientation are reshaped by sustained reflection on the Buddha's qualities. Drawing on selected Pāli sources and modern scholarship on gratitude, the discussion shows that Buddhist texts associate recollection of the Buddha with confidence, joy, tranquility, and concentration, while contemporary psychological and neuroscientific studies link gratitude with well-being, prosociality, and neural activity related to valuation, moral cognition, and emotion regulation. At the personal level, Buddhānussati may support emotional balance, resilience, ethical self-regulation, and reduced self-centered rumination. At the social level, it may foster humility, compassion, the expression of gratitude, and relational harmony within families, classrooms, and religious communities. The article argues, however, that scientific findings should not be used to reduce Buddhist soteriology to neurobiology, nor should speculative claims be treated as established evidence. The most defensible conclusion is that contemporary gratitude research can illuminate selected psychological and social dimensions of Buddhānussati, while Buddhist sources provide the deeper ethical and liberative framework within which the practice should be understood. Future research should employ philologically grounded textual study and culturally sensitive empirical designs to examine individual and communal forms of Buddhānussati more rigorously.

Keywords: Buddhānussati; Recollection of the Buddha; Contemplative practice; Gratitude; Social well-being

Introduction

In both Buddhist thought and contemporary psychology, gratitude is more than a passing positive emotion. It is a mode of perception that reorients attention toward what is valuable, received, and worthy of response. Modern psychological literature consistently associates gratitude with well-being, adaptive functioning, and healthier relationships, while also recognizing that gratitude is relational, moral, and context-dependent rather than merely hedonic (Wood et al., 2010; Algoe, 2012). Within Buddhism, however, gratitude is situated within a more demanding framework of ethical cultivation and liberation. It is not simply a tool for feeling better, but a practice that can transform how people understand themselves, others, and the path to freedom from suffering.

One important Buddhist expression of gratitude is Buddhānussati, the recollection of the Buddha. In the early discourses and later Theravāda commentarial tradition, recollecting the Buddha's qualities is presented as a contemplative discipline that straightens the mind, inspires confidence, and leads progressively toward joy, tranquility, and concentration (Bhikkhu Bodhi, 2012; Buddhaghosa, 2010). This sequence is crucial because it shows that Buddhānussati is not reducible to ritual recitation or pious admiration. Rather, it is a structured mental practice in which the recollection of awakened qualities such as wisdom, purity, compassion, and freedom from defilement serves as a means to reshape the practitioner's own consciousness and conduct.

Contemporary gratitude research offers a useful, though limited, dialogue partner for interpreting this practice. Reviews and intervention studies suggest that gratitude is associated with enhanced well-being, greater life satisfaction, stronger mental health, and more prosocial behavior. Neuroimaging research further indicates that gratitude engages regions implicated in valuation, moral cognition, and socioemotional processing, especially medial prefrontal areas, while gratitude expression may produce durable changes in neural responses to prosocial stimuli (Fox et al., 2015; Kini et al., 2016; Wood et al., 2010). At the same time, the evidence base calls for caution: physical-health outcomes remain promising but mixed, and causal physiological claims should not be overstated (Boggiss et al., 2020; Hazlett et al., 2021).

This contemporary literature is especially relevant when Buddhānussati is analyzed at both personal and social levels. At the personal level, recollection of the Buddha may function as a contemplative strategy for emotional regulation, reduction of agitation, moral self-formation, and the cultivation of resilient meaning. At the social level, gratitude and gratitude expression have been shown to support prosocial behavior, relational growth, and perceptions of social worth, suggesting that Buddhānussati may also strengthen humility, compassion, respect, and harmonious coexistence in communal life (Grant & Gino, 2010; Algoe et al., 2013). Such a perspective is particularly valuable for Buddhist studies because it allows the practice to be interpreted not only as inward devotion but also as a resource for ethical and social well-being.

Accordingly, this article argues that Buddhānussati should be understood as a contemplative form of gratitude that integrates devotion, cognition, affect, and ethics. The aim is not to claim that Buddhist liberation can be explained fully by neuroscience, nor to treat speculative notions such as biofield transmission as established scientific facts. Rather, the goal is more modest and more defensible: to show how modern gratitude research can illuminate selected psychological and social dimensions of Buddhānussati, while Buddhist texts preserve the deeper soteriological meaning of the practice. In this way, Buddhānussati may be studied as a serious contemplative discipline whose significance extends from personal transformation to social harmony.

Gratitude to the Buddha (Buddhānussati)

Gratitude has been admired in cultures throughout the world as a primary, if not the most basic, emotional state, capable of transforming suffering into satisfaction, alienation into connectedness, and fragmentation into wholeness. In the Buddhist tradition, this transformation is embodied in the practice of Buddhānussati (recollection of the Buddha), an act of devotion and contemplation that involves recollecting enlightened qualities until practitioners feel “bright, joyful, and believing.”

The above act of recollection, as explained in texts such as the Aṅguttara Nikāya and the Visuddhimagga, is not simply a matter of mouthing pious phrases but rather a precise psychophysical technique for redirecting conscious awareness from self-involved agitation to luminous peace.

Meanwhile, contemporary neuroscience has shown that gratitude is a potent modifier of the brain and body. Functional MRI studies show that gratitude activates neural regions associated with the "down-regulation" of negative affect, including the medial prefrontal cortex (mPFC) and anterior cingulate cortex (ACC), as well as perigenual ACC and medial orbitofrontal cortex under conditions of promoted social bonding, though psychophysiological studies indicate that gratitude increases vagal tone while reducing both cortisol levels and a number of multi-system biomarkers, such as resting blood pressure.

These results are consistent with the traditional Buddhist explanation of how saddhā (faith) leads to pīti (joy), passaddhi (tranquility), and then samādhi (one-pointedness). Such a confluence of meditative insight and empirical fact is rich soil for integrative investigation. In this perspective, devotion and information unite: the meditative recollection of wisdom and compassion translates psycho-physiologically into a reconfiguration toward tranquility.

Functions in Buddhist Meditation

Early canonical texts, such as the Aṅguttara Nikāya 6.25 or commentaries like Buddhaghosa's Visuddhimagga, represent Buddhānussati meditation in just this way—that is, recollection of the Buddha's nine epithets—Perfectly Enlightened One, Accomplished in Conduct, Knower of Worlds, Unsurpassed Trainer and so on —that is designed to make settledness of attention and emotions pure (Buddhaghosa trans. Ñāṇamoli, 2010). The meditator's repeated reflection on these qualities had the effect that "the mind becomes pure, without impurities, bright and joyful, believing", thereby leading naturally to concentration (samādhi). This threefold process–faith (saddhā), rapture (pīt i), serenity (passaddhi)–occurs throughout the Nikāyas as a psychophysical sequence much like what we understand today by affect regulation. In the Abhidhamma, gratitude is placed as a sobhana cetasika (beautiful mental factor), diametrically opposed to greed or hatred. Its cultivation, therefore, restructures the cognitive terrain of consciousness in a way that is newly attuned to non-harming and clarity.

Buddhānussati in the modern cognitive view

From a modern cognitive view, Buddhānussati can be seen as intentional training of attention and emotion. All epithets serve as semantic nodes that trigger related moral and sensory images, thereby recruiting distributed value and image

circuits in the brain. These text-based and experiential levels meet in a pattern reflective of those observed in affective neuroscience's emotion-based neuroplastic mechanisms. Brain networks of perspective-shifting mPFC/ACC. The DMN is a network of structures that are involved in self-referential rumination (Brewer et al.). The ventral striatum and the NAcc produce dopaminergic reward signals that promote prosocial happiness (Fox et al., 2015; Kaplan, Damasio, & Damasio, 2009); the anterior insula contributes to bodily awareness and warmth. Repetition over time strengthens these circuits, leading to structural changes that can be assessed with voxel-based morphometry: increased gray matter in the mPFC and hippocampus following long-term gratitude practice (Karns, Moore & Mayr, 2020).

Gratitude and Health: Neuroscientific, Developmental, and Clinical Perspectives

The parallelism between Buddhist phenomenology and neuroscientific findings may call for a neurophenomenological approach (Varela, 1996). Within this model, first-person reports, faith, uplift, and serenity are processed as patterned data associated with physiological signatures, including heart-rate variability (HRV), electroencephalographic (EEG) coherence, and hormonal modulation. There is empirical support for the effect of chanting and recollection on lowering cortisol levels and elevating alpha–theta brainwave synchrony, a form consistent with a canonical depiction of "mind like a still lake" (Lee, Park, & Kim, 2021).

These physiological findings support the Buddhist assertion that recollection has a calming effect on emotions by mapping subjective calm onto parasympathetic predominance and vagal throughput. This parallels the emerging psychoneuroendocrine literature on gratitude interventions, which have also been found to decrease cortisol and improve markers of immune function (Redwine et al., 2022; Koenig, Al Zaben, VanderWeele, & VanderWeele, 2022).

In Buddhist soteriology, gratitude goes beyond the realm of social exchange and into a cosmological orientation to dependent origination (paṭiccasamuppāda). Remembering the Buddha reminds us of the cycle of cause and condition that supports enlightenment. This non-transactional direction of attention eclipses self–other barriers, in line with neurological research finding

that self-transcendent emotions (e.g., awe) deactivate DMN activity and increase the connectivity in attention and salience networks (Fox et al., 2015).

Buddhānussati, accordingly, may be seen as a form of disciplined practice of self-transcendence: an intentional redirection of affective energy away from self-centered narratives towards universal appreciation. And this reorientation also maps onto objective neural states: downregulation of midline self-circuitry, and upregulation in empathy-related areas such as the temporoparietal junction.

In clinical studies, gratitude is related to the regulation of stress systems and well-being. The diurnal rhythm of cortisol is altered by gratitude journaling (Redwine et al., 2022), whereas heart rate variability (HRV) coherence inversely relates to feelings of calm (Neal, Kramer, and Richards, 2022).

Chorus singing increases endorphins and oxytocin and enhances social connections and pain threshold (Fancourt & Steptoe, 2021). These effects are consistent with the Visuddhimagga's assertion that recollection "gladdens the heart and allays the fires of defilement." A balance of autonomic tone corresponds to "cooling" as a Buddhist metaphor for parasympathetic maintenance. Hence, the empirical and contemplative lexicons ultimately converge on the same biophysical reality: decreased sympathetico-tonic activation and enhanced regulatory flexibility.

Neurochemically, the practice of gratitude is associated with elevations in serotonin, dopamine, and oxytocin and decreases in cortisol and pro-inflammatory cytokines (Jackowska & Steptoe, 2021). This network may underlie the affective triad of Buddhānussati: faith, joy, and serenity, mediated by neurochemical cascades that balance stress resilience and reward prediction. Rhythmic prosody promotes vagal afference, which feeds back to brainstem nuclei and stabilizes attention. This reciprocal loop is the Buddhist passage: "Saddhā paccayā pīti vvataṃ ghanaṃ sukha-ñcaa ritta-jjhosānaṃ samādhi," which translates to "faith → joy → (tranquil) mindful happiness or bliss > concentration."

Given the reported lack of effect, these findings are consistent with the view that Hebbian learning ("cells that fire together, wire together") captures at least some of the plastic consolidation from these affective sequences into long-lived traits. Memory consistently connects moral significance with positive

valence, moving emotional baselines from anxiety to calm. There is a long-term neuroplastic adjustment that supports this recalibration. Long-term practitioners of meditative states show increased cortex volume in insular prefrontal areas (Karns et al., 2020), which is compounded with high levels of empathy and emotion regulation.

From a Buddhist perspective, this is bhāvanā – the development of the mind through repetition. Over time, the practitioner's perceptual field is reorganized; joy becomes not just a momentary state but a default setting. In the Abhidhamma, "wholesome consciousness arises with lightness and pliancy," a principle that appears to be directly paralleled in contemporary neuroscience by increased resting-state flexibility and reduced entropy in affective networks.

Here, however, epistemological humility is still necessary. Neurocorrelates define substrata, not the liberative awakening to non-self (anattā). Nonetheless, the conjunction of contemplative phenomenology with neuroscience suggests a correspondence between dependent origination and systemic interdependence, thereby imagining reality as dynamic co-arising networks. All three aspects refine one another without reductionism; Varela's idea of multidirectional mutual constraint is pertinent, and first-person insight and third-person data sharpen each other. Buddhānussati is thus a laboratory for interdiscursive investigation.

In clinical practice, one can foresee gratitude-based chanting protocols for cardiovascular rehabilitation, trauma healing, or chronic pain gating. HRV coherence, endorphinergic analgesia, and resilience in group chanting treatment settings have already been demonstrated by Streeter et al., Fancourt and Steptoe, and others. PNI models suggest effects on inflammation and immunosurveillance.

The purity, wisdom, and compassion arising from gratitude in the Buddha practice fundamentally alter the autonomic state from a defensive mode to a social engagement mode. Slow, repetitious chanting and social synchrony reinforce ventral vagal tones. Hence, when humans gather to remind themselves of their believed virtues, there is collective peace. The biochemistry of faith might correspond to a type I neuroception of safety- the embodied state that the world is secure when directed toward wisdom and compassion.

The polyvagal view (Porges, 2011) offers insight into why remembering Buddha's gratitude evokes a sense of calm assurance. The meaning of the epithets, purity, wisdom, and compassion, they transmit to semantic structures as implicit safety signals that, in turn, activate an autonomic state from defensive to social engagement mode. Type of chanting affects the progressive striatum and ventral vagal tone, and social synchrony strengthens cues of belonging. This accounts for the purported simultaneous peace upon the gathering of monks. The neurophysiological underpinning of faith might then indeed be a neuroception of safety, an embodied awareness that the universe is trustworthy in its wisdom- and compassion-based orientation.

In Western psychology, gratitude frequently reinforces the social hierarchy (the "benefactor–recipient" roles). In Buddhism, it deconstructs them and reveals that the giver, the receiver, and the gift rise and fall together. The practice thus brings together phenomenology, ethics, and metaphysics into a transformation that neurobiology alone cannot express. But neurobiological proof of their health benefits lends practical credibility to what were once ancient claims. Buddha's teaching that "a mind adrift towards thankfulness glows during night and day" ([38], p.595) can be metaphorically (and physiologically, perhaps) reinvented as a sustained parasympathetic coherence and diminished inflammatory signaling.

Recent clinical studies further support this association. Randomized controlled trials (RCTs) involving gratitude have been shown to enhance HRV and reduce blood pressure (Neal et al., 2022); chanting meditation has been found to elevate alpha coherence and lower stress hormones (Lee et al., 2021). Biofield-based healing trials have shown mild to moderate enhancements of immune markers (Jain, Mills, & Yount, 2021). Gratitude in cancer survivors has been associated with improved immune function and emotional resilience (Yount et al., 2021). These findings support our hypothesis that devotional gratitude, particularly as expressed in sound and rhythmic meditative practice, is a multi-system regulator of homeostasis. The Buddhist term for "cooling the fires" gains a dramatic physiological mirror image in decreased cortisol, stabilized autonomic balance, and anti-inflammatory gene expression (Kaliman et al., 2022).

Some practical applications include gratitude-recollection exercises in schools, which could enhance students' concentration, compassion, and ethicality. In organizations, one may use secular phenomena to enhance ethical climate and

social connection. However, one must be careful not to instrumentalize sacred things for productivity gains.

To maintain academic rigor, constraints should be foregrounded. Correlation does not mean causation; placebo or expectancy effects can also contaminate results; cross-cultural differences also make generalization difficult. Furthermore, Buddhist liberation objectives go beyond well-being measurements. The absence of cessation of suffering (dukkha-nirodha) cannot be defined on HRV and cytokine levels. However, such proxies illuminate the mediating conduits through which conscious aspiration transmutes into biological coherence, turning metaphysical longing into quantifiable uniformity. Buddhānussati thus serves as a bridging paradigm for the nascent field of contemplative studies, in which spiritual practice is neither mystified nor trivialized but examined as a living crossroads of consciousness, physiology, and meaning.

Gratitude to Buddha as a collective practice

One framework for collective practice can be discussed and explored in biofield science. The heart produces the strongest rhythmic electromagnetic field of the body, which can be measured several feet away, and HRV coherence correlates with ordered field patterns (McCraty & Zayas, 2022). When several people self-entrain their heart rates (related to HRV) simultaneously, as when groups meditate together or chant, their signals may exhibit cross-correlation above chance levels (Morris, Rein, & Atkinson, 2021).

The proposed mechanism is simple: respiratory and auditory entrainment, visual cues, and interpersonal resonance of the heart's field. While the data are preliminary, the results are consistent with Buddhist teachings on shared radiance (ānubhāva) and the field of merit (puññakkhetta).

One proposed mechanism linking the biofield to Buddhānussati can be tentatively stated as follows: the electromagnetic field of the heart may serve as the proximal mechanism for physiological resonance that supports affective attunement among meditators. In gratitude and reverence, dominant states, HRV is highly ordered; these coherent signals may influence surrounding nervous systems through sensory and electromagnetic coupling.

Collective practice introduces even more mechanisms on top of personal transformation. Studies on physiological synchrony show that individuals engaged in mutual positive affect manifest coherent levels of HRV, respiration, and even phase alignment of EEG (Farias et al., 2022). The few biofield studies that do find small but detectable inter-personal correlations in HRV coherence (Morris, Rein, & Atkinson, 2021) await replication and clarification of the mechanism. Controlled studies with shielding, random pairing, and time-lag are necessary to establish whether such coupling occurs for connections beyond classical sensory systems. Until then, declarations like "energy transmission" should still be couched as hypotheses, not conclusions.

The data indicate that Buddhānussati is a neurospiritual practice that generates observable psychophysiological benefits. It draws upon prefrontal–limbic circuits implicated in valuation and emotion regulation, influences autonomic equilibrium through the pursuit of rhythmic breathing, and possibly facilitates socially induced synchrony in group situations through sensory and electromagnetic coupling. Well-being outcomes include reductions in cortisol (Redwine et al., 2022), increases in HRV (Neal et al., 2022), improvements in immune profiles (Koenig et al., 2022), and improvements in mood and resilience scales (Boggiss et al., 2020). New biofield findings suggest a potential, though not yet proven, energetic contribution to the entrainment of collective coherence (Rein, 2023).

By synthesizing canonical insights with neuroscientific findings, Buddhānussati is not simply devotional hymnody; rather, it has scientific and medical support for its benefits to emotional and physical health. And ultimately, the alignment of Buddhist soteriology and modern psychophysiology makes sense: they are both the quest for the same freedom from fragmentation into coherence and compassion. The law of attraction thanks the Buddha insofar as remembrance, chanting, and meditation are pathways to liberation. Behavioral data now support some of that practice as an empirical way to develop resilient health in our modern era.

Personal and Social Benefits of Buddhānussati

From a personal perspective, Buddhānussati may be interpreted as a contemplative discipline that reorders both attention and affect. By turning the mind repeatedly toward the Buddha's exemplary qualities, the practitioner moves

away from self-preoccupation, fear, and reactive mental states toward confidence, calm, and moral clarity. This helps explain why Buddhist sources associate recollection with gladness, tranquility, and concentration, and why modern gratitude research links grateful attention with psychological well-being, reduced anxiety and depression, and more stable emotional functioning (Bhikkhu Bodhi, 2012; Buddhaghosa, 2010; Diniz et al., 2023). In this sense, the personal benefit of Buddhānussati is not only emotional comfort, but the gradual formation of character: reverence becomes a support for restraint, ethical mindfulness, and resilience in the face of suffering.

From a social perspective, Buddhānussati may also be understood as a practice that strengthens relational and communal life. Research on gratitude shows that expressing gratitude increases prosocial behavior and strengthens relationship quality over time (Grant & Gino, 2010; Algoe et al., 2013). By analogy, recollection of the Buddha in Buddhist communities may reinforce shared moral memory, gratitude toward teachers and traditions, and a relational ethos grounded in humility and compassion. In educational, familial, and temple settings, such practice can support respect, patience, mutual care, and ethical cohesion. Therefore, Buddhānussati should not be treated solely as a private devotional act; it may also serve as a socially formative practice that fosters peaceful coexistence and compassionate community life.

Conclusion

This article has argued that Buddhānussati can be interpreted as a contemplative form of gratitude in which recollection of the Buddha's qualities reshapes cognition, emotion, and ethical orientation. Buddhist sources portray this practice as one that arouses confidence, gladness, tranquility, and concentration, while contemporary gratitude research offers useful parallels, showing associations between gratitude, well-being, prosocial motivation, and neural processes related to valuation and emotion regulation. These convergences do not collapse Buddhist meditation into neuroscience, but they do suggest that Buddhānussati may be meaningfully discussed as a practice with identifiable psychological and social significance.

At the personal level, Buddhānussati may help reduce agitation, reframe attention away from self-centered rumination, and cultivate a stable disposition

of reverence, restraint, and resilience. At the social level, it may foster expressions of gratitude, humility, relational warmth, and prosocial responsiveness, thereby contributing to healthier families, classrooms, and Buddhist communities. These benefits are especially important for contemporary Buddhist studies because they show that recollection of the Buddha is not only a ritual inheritance but also a living practice with relevance for well-being and social harmony.

Nevertheless, scholarly rigor requires conceptual restraint. Current evidence does not justify strong causal medical claims, broad metaphysical assertions, or uncritical appeals to electromagnetic or "biofield" explanations. The more defensible conclusion is that Buddhānussati aligns with a broader body of gratitude research showing benefits for mental health and social functioning, while its deeper meaning remains ethical and soteriological rather than merely therapeutic. Future research should compare Buddhānussati with other contemplative practices, employ culturally grounded measures, and examine both individual and communal forms of practice without reducing liberation to biomedical outcomes. Understood in this way, Buddhānussati remains a profound Buddhist discipline that contributes not only to personal well-being but also to compassionate and ethically grounded social life.

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