



GANDANTEGCHENLING MONASTERY,
THE CENTER OF MONGOLIAN BUDDHISTS

BUDDHISM AND SCIENCE

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ARTIFICIAL INTELLIGENCE (AI) – ENLIGHTENMENT

Artificial intelligence is
limited by the given data.

Philip Boucher

*Sociologist, specializing in the relationship
between technology and society*

In Buddhism, it is held that "Material
things reach a certain peak and stop,
but compassion and wisdom can reach
an infinite level"

*Dharmakirti, Commentary on Valid Cognition,
Pramana Vartika Karika*

**The enlightenment of the mind involves removing all negative
thoughts and emotions, and the unlimited growth of one's mind.**



FUTURE CHALLENGES

Although rapid advances in science and technology have made human life easier and brought many benefits, **can they genuinely bring inner peace and happiness to humanity?**

What strengthens relationships between people and promotes emotional happiness?

It is believed that inner peace and happiness cannot be achieved through the development of artificial intelligence and technology alone.

*Michael Cheng-Tek Tai,
distinguished professor of medical humanities
and bioethics at Chung Shan Medical
University in Taiwan*

**CAN THESE BE DISCOVERED BY PURSUING
BUDDHIST ENLIGHTENMENT?**



THE METHOD TO ATTAIN ENLIGHTENMENT

ENLIGHTENMENT

Dependent origination,
emptiness

Bodhichitta

Compassion

“Every living being has the capacity to become a Buddha”, taught the Buddha in the King of Samadhi Sutra.

The immediate benefits of aiming for enlightenment:

Through the initial exercises of the practices of the path to enlightenment, one can resolve many issues facing modern society and bring peace and calm to the human mind.



BODHICHITTA

The strong mind that wishes
enlightenment for others.

When developing the mind in stages, one mediates
with compassion as foundation.

**Reflecting on compassion and
bodhichitta benefits health.**



THE METHOD OF CULTIVATING COMPASSION

Compassion is the foundation of bodhichitta. **Compassion is the strong aspiration to free others from suffering.**

Initially, one must develop equanimity. Without cultivating equanimity, the development of compassion becomes unbalanced.

LOVED ONES – loving kindness

NEUTRAL ONES – ignore

ENEMIES – hate

ALL BEINGS – unequal

By reflecting on compassion and learning to cherish all living beings, compassion becomes complete, and as a result, the human mind and spirit expand.



RESEARCH WORK BY SCIENTISTS

*A study published by the journal **ELSEVIER** concluded that cultivating compassion meditation leads to:*

- Decreased blood pressure, heart rate, and cortisol levels;
- Improved memory, concentration, and memory;
- Changes in the parts of the brain that regulate emotions.

*[Michaela C. Pascoe](#), Michael de Manincor, Jana Tseberja, [Mats Hallgren](#), Peter A. Baldwin, [Alexandra G. Parker](#),
Psychobiological mechanisms underlying the mood benefits of meditation*

This demonstrates that practicing compassion in buddhism sharpens the mind and enhances its strength.



RESEARCH WORK BY SCIENTISTS

1.6. Meditation meditates maladaptive distress: an integrative model

A wide body of literature shows that meditation practices are associated with improved mental health and wellbeing in diverse populations [35–37]. We propose that meditation practices reduce the distress experienced resulting from psychological stressors by impacting a number of key psychological processes.

3.3. Meditation and changes in brain structure and function related to mood

On the other hand, meditation practices have been shown to be associated with functional and structural changes in brain regions that are involved in the modifiable psychological process discussed above. The default mode network (DMN) for example is involved in emotional regulation and hypothesised to be important in terms of the impact of meditation on mood [112].

3.2. Meditation decreases autonomic arousal

We propose that meditation influences both psychological processes that decrease distress experienced in relation to stressors, and the corresponding autonomic arousal generally produced in response to stressors. These include increases in heart rate, respiration and blood pressure, and the release of blood sugar (glucose) into the bloodstream, [8].

3.2.1. Blood pressure

There is strong evidence for the beneficial effects of meditation on blood pressure (BP), as shown from multiple Meta-Analyses of randomised controlled trials (RCTs). One Meta-Analysis shows that concentrative or focused attention forms of meditation decreased resting SBP by 5.55 mm of mercury (mmHg) at post-intervention, in 3 studies comprising of 72 individuals. Transcendental Meditation (TM) was similarly seen to significantly decrease resting systolic blood pressure (SBP) at post intervention by 8.97 mmHg, compared to the time/attention control group, in 3 studies comprising of 151 individuals.



The next stage – BODHICHITTA

COMPASSION

Through the thought,
“May I free others from
suffering and its causes”



BODHICHITTA

The thought,
“I myself must attain
enlightenment”, becomes
powerfully awakened.

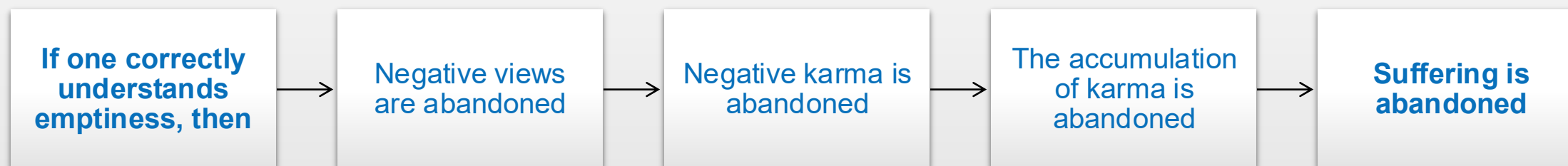
If compassion is helpful for us, then developing the next stage, bodhicitta, is even more powerful. For example, it makes a person happier and more resilient. We need to conduct research on the results achieved by cultivating bodhicitta.

EMPTINESS – All things do not exist by their own inherent nature, but exist dependently on others."

Agwaanbaldan tsorj (1797)

WHY SHOULD WE STUDY EMPTINESS?

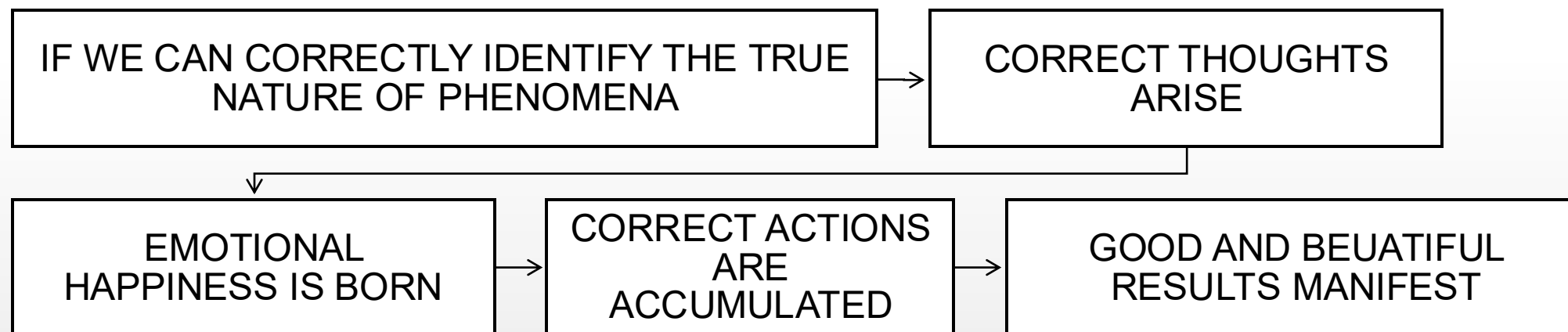
The master Nāgārjuna in "Fundamental Verses on the Middle Way" (Mūlamadhyamakakārikā, 2000):



THE REALIZATION OF BUDDHISM

Emptiness – The nature of existence

The inherent nature of any phenomenon is dependent on its relationship with our mind.



Studying emptiness is related to the happiness of our lives.



EMPTINESS – QUANTUM PHYSICS

Axel Palapa, a researcher at Claremont College, USA, in his work "The Connection between Quantum Mechanics and the Philosophy of the Great Vehicle (Mahayana) Buddhism," states about Nāgārjuna's view of Emptiness:

"Nāgārjuna explained the concept of emptiness in a way that, even at the current quantum level, the nature of existence seems to be interdependent, even before quantum physics emerged".



MEDITATION

CONCENTRATING ON THE BREATH

The human mind is connected with the breath. If one can make the breath soft and stable, the mind becomes stable.

Negative emotions cannot be fully eliminated by this alone. These are eliminated by meditating on their antidotes.

MEDIATING ON THE ANTIDOTE TO NEGATIVE EMOTIONS

Negative emotions cause us to perceive things wrongly. By listening to and understanding their true nature, one can meditate on the antidote to these negative feelings.

Through this practice, negative emotions are eliminated.

TANTRIC MEDITAION

There are subtle meditations for deep levels of practice.

MEDITATION – EFFECTS ON THE BRAIN

TYPES OF MEDITATION

ANALYTICAL MEDITATION

Meditating by gathering causes and reasons within a specific framework.

FOCUS MEDITATION

Meditating on a specific situation to stabilize emotions.



MONKS

- Relatively higher brain gamma waves;
- Gamma wave levels remained high even after meditation.

ORDINARY PEOPLE

- Gamma waves increased to certain degree;
- Gamma waves decreased after the meditation.

*Richard J. Davidson,
American psychologist and professor of psychology and
psychiatry at the University of Wisconsin–Madison*



CONCLUSION

Buddhism will play a significant role in overcoming future scientific challenges.

As Artificial Intelligence develops, guiding the inner mind towards enlightenment will lead more to happiness and peace.

The method of guidance lies in meditating on a wisdom that correctly recognizes the true nature of reality.

THANK YOU
FOR YOUR
ATTENTION

