

## “The Four Close Applications of Mindfulness”

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### ❖ Toward the First Revolution in the Mind Sciences and a Renaissance in Contemplative Inquiry

#### ➤ William James:

- Psychology is the Science of Mental Life, both of its phenomena and their conditions. The phenomena are such things as we call feelings, desires, cognitions, reasonings, decisions, and the like...”
- “I say ‘empiricism,’ because it is contented to regard its most assured conclusions concerning matters of fact as hypotheses liable to modification in the course of future experience; and I say ‘radical,’ because it treats the doctrine of monism itself as an hypothesis, and unlike so much of the half-way empiricism that is current under the name of positivism or agnosticism or scientific naturalism, it does not dogmatically affirm monism as something with which all experience has got to square.” (Occam’s Razor: “It is vain to do with more assumptions what can be done with fewer assumptions.”)
- “*Introspective Observation is what we have to rely on first and foremost and always.*” The word introspection need hardly be defined—it means, of course, the looking into our own minds and reporting what we there discover. *Everyone agrees that we there discover states of consciousness.*”
- “Introspection is difficult and fallible; and ... the difficulty is simply that of all observation of whatever kind... The only safeguard is in the final consensus of our farther knowledge about the thing in question, later views correcting earlier ones, until at last the harmony of a consistent system is reached.”
- “Let empiricism once become associated with religion, as hitherto, through some strange misunderstanding, it has been associated with irreligion, and I believe that a new era of religion as well as philosophy will be ready to begin. ... I fully believe that such an empiricism is a more natural ally than dialectics ever were, or can be, of the religious life.”
- “Psychology, indeed, is today hardly more than what physics was before Galileo, what chemistry was before Lavoisier. It is a mass of phenomenal description, gossip, and myth, including, however, real material enough to justify one in the hope that with judgment and good-will on the part of those interested, its study may be so organized even now as to become worthy of the name of natural science at no very distant day.”
- “Something definite happens when to a certain brain-state a certain ‘sciousness’ corresponds. A genuine glimpse into what it is would be *the* scientific achievement, before which all past achievements would pale. But at present psychology is in the condition of physics before Galileo and the laws of motion, of chemistry before Lavoisier and the notion that mass is preserved in all reactions. The Galileo and the Lavoisier of psychology will be famous men indeed when they come, as come they some day surely will, or past successes are no index to the future. When they do come, however, the necessities of the case will make them “metaphysical.” Meanwhile the best way in which we can facilitate their advent is to understand how great is the darkness in which we grope, and never to forget that the natural-science assumptions with which we started are provisional and revisable things.”

- Edward B. Titchener (1867–1927), who devoted his life to the development of introspective techniques, observed that the main difficulties of introspection are “maintaining constant attention” and “avoiding bias,” but a further difficulty is “to know what to look for.”
  - American behaviorist John B. Watson (1878–1958) argued that psychology must “bury subjective subject matter [and] introspective method,” and insisted that psychology must “never use the terms consciousness, mental states, mind, content, introspectively verifiable, imagery, and the like.”
  - Behaviorist B. F. Skinner (1904–90) argued that since mental phenomena lack physical qualities, they have no existence whatsoever, and he then presented a strategy for reducing the mind and human identity to the brain: “To agree that what one feels or introspectively observes are conditions of one’s own body is a step in the right direction. It is a step toward an analysis both of seeing and of seeing that one sees in purely physical terms. After substituting brain for mind, we can then move on to substituting person for brain and recast the analysis in line with the observed facts.”
  - Neuropsychiatrist Eric R. Kandel:
    - “The task of modern neuroscience is as simple as it is formidable. Stripped of detail, its main aim is to provide an intellectually satisfying set of explanations in cellular and molecular terms of normal mentation: of perception, motor coordination, feeling, thought, and memory. In addition, neuroscientists would ultimately also like to account for the disorders of functions produced by neurological and psychiatric disease.”
    - “Our understanding of the biology of mental disorders has been slow in coming, but recent advances like these have shown us that mental disorders are biological in nature, that people are not responsible for having schizophrenia or depression, and that individual biology and genetics make significant contributions... The brain is a complex biological organ possessing immense computational capability: it constructs our sensory experience, regulates our thoughts and emotions, and controls our actions. It is responsible not only for relatively simple motor behaviors like running and eating, but also for complex acts that we consider quintessentially human, like thinking, speaking and creating works of art. Looked at from this perspective, our mind is a set of operations carried out by our brain. The same principle of unity applies to mental disorders.”
- Since 1950, there has been a tenfold increase in depression, which is now the number-one cause of disability worldwide, with the risk of depression thirty-two percent higher in wealthy countries.
  - *American Journal of Psychiatry* (2002), up to 75% of the efficacy attributed to antidepressants is actually due to the placebo effect.
  - *The Journal of the American Medical Association* (2010): the benefits of antidepressants are “nonexistent to negligible” in patients with mild, moderate, and even severe depression, and high doses of antidepressants are hardly more effective than low ones. Only in patients with very severe symptoms (about 13% of people with depression) was there a statistically significant drug benefit.

- Geoffrey Carr (Science Editor of *The Economist*): “My guess is that we won’t really understand consciousness until we have a paradigm shift—that somebody will wake up one morning and say ‘Eureka’! A new wave of thought will then probably emerge, and that will be the basis of a proper theory of consciousness.”
- Restoring the primacy of first-person, direct observation to the scientific study of the mind
- Restoring the primacy of *śamatha* and *vipaśyanā* to Buddhist meditation

### Introduction to the Four Close Applications of Mindfulness

- ❖ Mindfulness of the body, feelings, mind, and phenomena: Buddha: “This is the direct path, monks, for the purification of beings, for the overcoming of sorrow and lamentation, for overcoming pain and grief, for reaching the authentic path, for the realization of *nirvana*—namely the four applications of mindfulness.”

[*Satipaṭṭhānasutta*, 2]

- A unified pursuit of virtue, genuine happiness, and knowledge
- Contrast with the fragmented nature of these pursuits in the modern West
- Four approaches to these teachings: therapeutic, scientific, philosophical, and spiritual
- Relationships between the four applications and the Four Noble Truths
- The Four Noble Truths and the distinction between mundane and genuine happiness, which is what’s left when the veils of afflictions are removed.
- The contemplative science of the world of experience and the mind, versus the pursuit of a God’s-eye view of reality.
  - Galileo’s ideal of seeking to understand the mind of the Creator by way of His Creation.
  - Francis Bacon’s ideal of scientific and technological progress, based on the premise that knowledge is power, and when embodied in the form of new technical inventions and mechanical discoveries, it is the force that drives history
- ❖ The Framework of Buddhist Practice
  - Ethics ~ social & environmental flourishing
  - Mental Balance ~ psychological flourishing
  - Contemplative Insight ~ spiritual flourishing
  - The integrated pursuits of ethics as the laboratory, mental balance (genuine happiness) as the technology, and the Four Applications of Mindfulness (understanding) as the science, with all three supporting each other.
  - Inner science versus outer science: Exploring reality from the inside out, rather than from the outside in
  - Aim: to eliminate suffering and the source of suffering in our daily lives: to know, transform, and liberate the mind
    - The opposite of the “opiate of the people,” it brings greater clarity to the whole range of experience, especially that which we commonly overlook, suppress, or repress.
    - To distinguish perceptual reality from conceptual superimpositions, including labels, commonsense assumptions, and emotional reactions

## The Four Applications of Mindfulness

- Nāgasena: “Mindfulness, when it arises, calls to mind wholesome and unwholesome tendencies, with faults and faultless, inferior and refined, dark and pure, together with their counterparts... mindfulness, when it arises, follows the courses of beneficial and unbeneficial tendencies: these tendencies are beneficial, these unbeneficial; these tendencies are helpful, these unhelpful. Thus, one who practices yoga rejects unbeneficial tendencies and cultivates beneficial tendencies.” [*Milindapañha* 37-38]
- Buddhaghosa: “By means of [mindfulness] they [i.e., other mental processes] remember, or it itself remembers, or it is simply just remembering, thus it is *mindfulness*. Its characteristic is not floating; its property is not losing; its manifestation is guarding or the state of being face to face with an object; its basis is strong noting or the close applications of mindfulness of the body and so on. It should be seen as like a post due to its state of being set in the object, and as like a gatekeeper because it guards the gate of the eye and so on.” [*The Path of Purification*, XIV, 141]
- Śāntideva: “In brief, this alone is the definition of introspection: the repeated examination of the state of one’s body and mind.”
- Asaṅga: “Mindfulness and introspection are taught, for the first prevents the attention from straying from the meditative object, while the second recognizes that the attention is straying.”
- Buddha: “Bāhiya, you should train yourself thus: In the seen let there be only the seen; in the heard, let there be only the heard, in the sensed let there be only the sensed, in the cognized let there be only the cognized. Thus, Bāhiya, you should train yourself. When, for you, Bāhiya, in the seen there is only the seen; in the heard, there is only the heard, in the sensed there is only the sensed, in the cognized there is only the cognized, then you, Bāhiya, are not [found] by way of that. When you, Bāhiya, are not [found] by way of that, then you, Bāhiya, are not over there. When you, Bāhiya, are not over there, then you, Bāhiya, are neither here nor there, nor in between the two. This is itself the ending of suffering.”  
[*Udāna* I, 10]
  - Distinguish between real phenomena (with causal efficacy) that present themselves to us perceptually, as opposed to imaginary phenomena (without causal efficacy) that we conceptually project upon experience.
  - Contrast with scientific materialism, which claims only material phenomena and their emergent properties have causal efficacy. “If it’s only in your mind, it’s not real.”
  - The Buddhist phenomenological, not mechanistic, approach to understanding causality

### I. Mindfulness of the Body

#### A. Mindfulness of Breathing as the preparation

1. “Just as in the last month of the hot season, when a mass of dust and dirt has swirled up, a great rain cloud out of season disperses it and quells it on the spot, so too concentration by mindfulness of breathing, when developed and cultivated, is peaceful and sublime, an ambrosial dwelling, and it disperses and quells on the spot evil unwholesome states whenever they arise.” [*Samyutta Nikāya* V 321-2]
2. Buddha: “I thought of a time when my Sakyan father was working and I was sitting in the cool shade of a rose-apple tree: quite secluded from sensual desires disengaged from unwholesome things I had entered upon and abode in the first meditative stabilization, which is accompanied by coarse and precise investigation, with well-being and bliss born of seclusion. I thought: ‘Might that be the way to enlightenment?’ Then, following that memory, there came the recognition that this was the way to enlightenment.” [*Majjhima Nikāya* I 246]
3. Cultivating Balance through Settling the Body, Speech, and Mind in their Natural States
4. Buddha: “Breathing in long, one is aware, ‘I breathe in long.’ Breathing out long, one is aware: ‘I breathe out long.’ Breathing in short, one is aware, ‘I breathe in short.’ Breathing out short, one is aware: ‘I breathe out short.’ ‘Attending to the whole body, I shall breathe in.’ Thus one trains oneself. ‘Attending to the whole body, I shall breathe out.’ Thus one trains. ‘Soothing the composite of the body, I shall breathe in.’ Thus one trains oneself. ‘Soothing the composite of the body, I shall breathe out.’ Thus one trains.” [*Ānāpānasati Sutta* 18]
5. Buddha: If one cultivates the four applications of mindfulness without the mind being concentrated and without having abandoned the impurities, one does not acquire one’s own mental sign (*sakassa cittassa nimittaṃ na uggāṇ hāti*) . [*Samyutta Nikāya* V 150-52]
6. Buddha: “In this manner, monks, the wise, experienced, skillful monk abides in happiness here and now and is mindful and introspective as well. What is the reason for that? Because, monks, this wise, experienced, skillful monk acquires the sign of his own mind.” *Samyutta Nikāya* [*Samyutta Nikāya* V 152].
7. Buddhaghosa: Once you have achieved the actual state of the first dhyāna, *samādhi* can be sustained “for a whole night and a whole day, just as a healthy man, after rising from his seat, could stand a whole day.” [*The Path of Purification*, I V, 33]
8. The Buddha declared that with the achievement of the first dhyāna, one is for the first time temporarily freed from five types of obstructions, or hindrances, that disrupt the balance of the mind:
  - (1) sensual craving, (2) malice, (3) laxity and dullness, (4) excitation and anxiety, and (5) uncertainty. [*Majjhima Nikāya* I, 294–95]

9. The Buddha likens *śamatha* to a great warrior and *vipaśyanā* to a wise minister. [*Samyutta Nikāya* IV 194-195]
  10. Buddha: “So long as these five obscurations are not abandoned one considers himself as indebted, sick, in bonds, enslaved and lost in a desert track.” [*Sāmaññaphala Sutta (Dīgha Nikāya* I 73)]
  11. Arhat Upatissa: the standing and walking postures are particularly suitable for lustful natured personalities, while sitting and reclining are more appropriate for anger-natured personalities. [*Path of Freedom (Vimuttimaggā)*, Kandy: BPS, 61]
  12. Buddhaghosa: “Postures: walking suits one; standing or sitting or lying down suits another. So he should try them, like the abode, for three days each, and that posture is suitable in which his unconcentrated mind becomes concentrated or his concentrated mind becomes more so. Any other should be understood as unsuitable.” [*Visuddhimagga* IV: 41]
- B. “In this way one remains focused internally on the body, or externally on the body, or both internally and externally on the body. Or one remains focused on the phenomenon of origination with regard to the body, on the phenomenon of passing away with regard to the body, or on the phenomenon of origination and passing away with regard to the body. Or one’s mindfulness that ‘There is a body’ is maintained to the extent of knowledge & remembrance.”
- Satipaṭṭhānasutta* 1
1. The *Vibhaṅga* explains “internally and externally” as entailing an understanding of the contemplated object as such, without considering it as part of one’s own subject experience or that of others.
  2. “Again, monks, he reviews this same body, however it is placed, however disposed, as consisting of elements thus: ‘in this body there are the earth element, the water element, the fire element, and the air element.’”
  3. The inclusion of the four elements in this practice suggests that “the body” may include all manifestations of the four elements, internally and externally.
  4. This is followed by instructions on the practice of introspection throughout the day, focused especially on one’s body and physical activities.
  5. Observe, instead of identifying with, the factors of emergence and dissolution of bodily experiences.
  6. Observe the body *as* the body, the feelings *as* the feelings, etc., not confusing these phenomena for other things that they are not. Specifically, it is important not to confuse our own individual feelings, mental states, or ideas for intersubjective phenomena with others.
  7. Black box problem

8. Buddha had this in mind when he declared, “it is in this fathom-long body with its perceptions and its mind that I describe the world, the origin of the world, the cessation of the world, and the way leading to the cessation of the world.” [Saṅgīyutta Nikāya II 36]

C. The meditation

1. Begin with mindfulness of breathing and proceed to inspecting the four elements, tour the five physical sense fields, and inspect the three signs of existence.
2. The reasons for deconstructing the five sense fields: do any of them overlap?
3. Are any of the five types of appearances stable, inherently pleasurable, or inherently “mine” (merely by agreement or by grasping?)

II. Mindfulness of Feelings

- A. The dominance of feelings in our lives: their role in altruism, loving kindness, and compassion, as well as in craving, hostility, and conflict
- B. Three basic kinds of feelings of physical and mental pleasure, pain, and indifference
  1. Feelings associated with each of the six senses, with mental awareness including perception and conception.
  2. Distinguish between bare sensations and feelings.
  3. The status of indifference, or equanimity, as a neutral feeling; cf. the number 0.
- C. Buddha: “There are these four kinds of happiness to be won by a householder who enjoys sense pleasures from time to time and when occasion offers. What four? The happiness of ownership, the happiness of wealth, the happiness of freedom from debt, and the happiness of blamelessness. [Aṅguttara Nikāya II 68]
- D. Three kinds of genuine well-being
  1. Well-being arising from blamelessness and contentment
  2. Well-being gained through *samādhi*
  3. Supreme well-being of complete freedom through insight
- E. Buddha: Find out what really constitutes true well-being and, based on this understanding, pursue it. [Majjhima Nikāya III 230]
- F. Stimulus-driven unhappiness and authentic unhappiness
- G. Regarding the accounts of nirvāṇa in the Pāli canon, it is referred with such terms as “unborn, and deathless and that is even post-mortem “peaceful, blissful, auspicious.”
- H. Aṅguttara Book of Nines: Sariputta exclaims “nibbāna is bliss, nibbāna is bliss.” When asked, “How can nibbāna be bliss when nothing is felt there?” he replies, “Just this, friend, is the happiness here, that nothing is felt here.”
- I. Buddha: “It is by one’s self that one purifies oneself,” “there is such a thing as self-initiative” (*attakāra*), “you must be a refuge unto yourself (*attasaraṇa*).”

- J. *Mahāparinirvāṇasūtra*: “The Buddha-Nature of beings is eternal and unchanging.”
- K. *Śrīmaladevisiṃhanada Sūtra*: “The cessation of suffering is not the destruction of a phenomenon. Why? Because the dharmakāya of the Buddha is primordially existent; it is not made, not born, not exhausted, and not to be exhausted. It is permanent, reliable, completely pure by nature, completely liberated from all the sheaths of the mental afflictions ... and so it is called the cessation of suffering. This is what is called the *tathāgatagarbha*, dharmakāya freed from the veils of the mental afflictions.”
- L. Attend to feelings in yourself and others, the factors of emergence and dissolution, as well as the locations of feelings, and their causal nexus before and after their emergence.
1. Recognizing feelings, instead of simply identifying with them, clinging to them, or denying them.
  2. Note the relations between pleasure/craving-attachment, pain/anger-hostility, and indifference/dullness and inattentiveness.
- M. Note the influence of self-centered thoughts and conceptual grasping on the feelings experienced.
1. Are they influenced by the observation of them? Are there two minds, one recalling the affective state of the other?
  2. Viewing feelings, especially mental feelings, as symptoms, rather than qualities of the object.
  3. Are feelings absolute or relative?
- N. Meditation
1. Observe feelings in the body and mind, generating them if necessary.
  2. Recognize when pleasant, unpleasant, and neutral feelings occur and to know them for what they are. Similarly apply discerning mindfulness to worldly and unworldly pleasant, unpleasant, and neutral feelings
  3. Examine their origins, their relation to grasping and identification and to the stimuli that arouse them.
  4. Are they mental objects or subjective ways of experiencing mental objects?
  5. Examine the three signs: impermanence, suffering, and no-self
  6. Use mindfulness of breathing as the basis for mindfulness of bodily feelings, and settle the mind in its natural state as the basis for observing mental feelings.
- III. Mindfulness of the Mind
- A. Mindfulness of Mental Processes
1. Javana includes the karmically active state in which defilements “arrive” like visitors arriving at a house. [*Aṅguttara Nikāya* I 160]
  2. *Javana* with and without grasping: Examine the ethical consequences of “possessed” and “unpossessed” mental events.

3. Identify “mental afflictions” (*kleśa*), which can be identified by the criterion that they disrupt the balance and equilibrium of the mind, and they distort (*kliṣṭa*) our awareness of reality.
  4. Precise definitions of ignorance-delusion, craving-attachment, hostility-hatred.
  5. Six root mental afflictions (Tib. *rtsa nyon drug*)
    - a. Ignorance (Skt. *avidyā*; Tib. *ma rig pa*)
    - b. Attachment (Skt. *rāga*; Tib. *’dod chags*)
    - c. Anger (Skt. *pratigha*; Tib. *khong khro*)
    - d. Pride (Skt. *māna*; Tib. *nga rgyal*)
    - e. Afflictive doubt (Skt. *vicikitsā*; Tib. *the tshom*)
    - f. False views (Skt. *drṣṭi*; Tib. *lta ba*)
  6. Inquiry into the processes of origination, abiding, and dissolution of mental processes
    - a. Observe the mind as it is affected by different affective and cognitive states, such as craving, hatred, delusion, anxiety, elation, concentration, and agitation.
    - b. Observe which mental states are wholesome and which unwholesome.
    - c. Are they stable or momentary, under your control or not, personal or impersonal?
    - d. As in mindfulness of feelings, observe the impact of the observation on the observed: observer-participancy.
    - e. Observe mental events internally, externally, internally-and-externally, and observe the factors of their origination and dissolution.
- C. Mindfulness of the Ground of the Mind
1. Buddha: “I know of no other single process which, thus developed and made much of, is pliable and workable as is this mind. Monks, the mind which is thus developed and cultivated is pliable and workable. Monks, I know of no other single process so quick to change as is this mind...Monks, this mind is luminous, but it is defiled by adventitious defilements. Monks, this mind is luminous, but it is free from adventitious defilements.” [*Aṅguttara Nikāya* I 8-10]
  2. *Aṅguttara Nikāya* I 257,7: The word *pabhassara* is used to describe the mind (*citta*) that has attained concentration (*samādhi*). It thus seems that it is in deep *samādhi* that the intrinsic luminosity of the mind emerges, at least temporarily.
  3. *Aṅguttara Nikāya* III 16.29-17.2 says explicitly that the mind freed from the five obscurations is luminous (*pabhassara*) and properly concentrated for the destruction of the taints.
  4. Hippocrates (c. 460-377 BCE): “Natural forces within us are the true healers of disease.” And “To do nothing is also a good remedy.”

5. The *bhavaṅga* is the undefiled state of the radiant mind that precedes *javana* and from which *javana* arise. It is naturally pure and undefiled.
6. *Bhavaṅga* is the mind's naturally pure state, but one that is normally inaccessible, as it mainly occurs during deep sleep. To unlock the power of this natural purity, the mind must be fully 'woken up' by meditative development, so that its radiant potential may be fully activated.
7. The *bhavaṅga* is also the natural, unencumbered state of mind, and it is the very last moment of a person's life—i.e., *bhavaṅga*-mind, is the form of "falling away" mind.
8. When you attend to the foreground of mental events (*javana*), they appear real, and the background (*bhavaṅga*) unreal; and when you attend to the space of the mind, the mental events within it appear illusory, while the space appears real.
9. Nāgārjuna (*Commentary on Bodhicitta, Bodhicitta-vivāraṇa*, vs. 34):  
 "When iron approaches a magnet, it quickly spins into place. Although it has no mind, it appears as though it did.  
 In the same way the substrate consciousness has no true existence, Yet when it comes [from a previous life] and goes [to the next] It moves just as though it were real.  
 And so it takes hold of another lifetime in existence."
10. *The Vajra Essence*: "O Vajra of Mind, the rope of mindfulness and firmly maintained attention is dissolved by the power of meditative experience, until finally the ordinary mind of an ordinary being disappears, as it were. Consequently, compulsive thinking subsides and roving thoughts vanish into the space of awareness. You then slip into the vacuity of the substrate, in which self, others, and objects disappear. By clinging to the experiences of vacuity and luminosity while looking inward, the appearances of self, others, and objects vanish. This is the substrate consciousness... Whatever they call it, in truth you have come to the essential nature [of the mind]."
11. *The Vajra Essence*: "The substrate consciousness, with its vacuous and clear nature, abides as the cause of everything that is emanated. The mind that emanates from this substrate consciousness presents forms, which are stabilized by a continuous stream of consciousness."
12. *The Vajra Essence*: "By applying yourself to this practice continuously at all times, both during and between meditation sessions, eventually all coarse and subtle thoughts will be calmed in the empty expanse of the essential nature of your mind. You will become still, in an unfluctuating state in which you experience bliss like the warmth of a fire, luminosity like the dawn, and nonconceptuality like an ocean unmoved by waves."

13. *The Vajra Essence*: “In your existence, when you encounter the dying process, which is to be purified, the outer appearances of the physical world, its inner animate sentient beings, and the intervening appearances of the five sensory objects all dissolve into clear emptiness. Openly resting in this for a while is the phase of the dissolution of mundane existence into the substrate.”
14. Analysis of substantial causes and cooperative conditions and of primary causes and contributing conditions; never is any one thing the sole cause of anything else.
15. *The Dhammapada*: “All phenomena are preceded by the mind, issue forth from the mind, and consist of the mind.”
16. *Ratnameghasūtra*: “All phenomena are preceded by the mind. When the mind is comprehended, all phenomena are comprehended. By bringing the mind under control, all things are brought under control.”
17. *Kevaddha Sutta*:  
The monk Kevaddha asked the Buddha, “Where do the four great elements—earth, water, fire, and air—cease without remainder?” The Buddha replied, “Monk, you should not ask your question in this way... Instead, this is how the question should have been put: “Where do earth, water, fire and air find no basis?  
Where are long and short, small and great, fair and foul—  
Where are “name and form” wholly destroyed?  
And the answer is:  
‘Where consciousness is signless, boundless, all-luminous,  
That’s where earth, water, fire and air find no basis,  
There both long and short, small and great, fair and foul –  
There ‘name and form’ are wholly destroyed.  
With the cessation of consciousness this is all destroyed.’”  
[*Dgha Nikāya* I 223]
18. Buddha: “For one who clings, motion exists; but for one who clings not, there is no motion. Where no motion is, there is stillness. Where stillness is, there is no craving. Where no craving is, there is neither coming nor going. Where no coming nor going is, there is neither arising nor passing away. Where neither arising nor passing away is, there is neither this world nor a world beyond, nor a state between. This, verily, is the end of suffering.” *Ullāna* 8:3
19. *Mahāparinirvāṇ asūtra*: “The Buddha-Nature of beings is eternal and unchanging.”
20. *Śrimaladeviṣiṃhanada Sūtra*: “The cessation of suffering is not the destruction of a phenomenon. Why? Because the dharmakāya of the Buddha is primordially existent; it is not made, not born, not exhausted, and not to be exhausted. It is permanent, reliable, completely pure by nature, completely liberated from all the veils of the mental afflictions... and so it is called the cessation of suffering. This is what is called the tathāgatagarbha, dharmakāya freed from the veils of the mental afflictions.

- D. The Meditation
1. Settle the mind in its natural state as the basis for examining the origination, abiding, effects, and dissolution of mental states and processes.
  2. Attending to the three signs, observing those mental processes that seem to be yours and those that do not.
  3. Practice meditative quiescence without a sign to observe the ground from which all mental activities emerge.
- IV. Mindfulness of Phenomena
- A. This includes all phenomena, mental, physical and otherwise, e.g., matter, space, time, and sentient beings.
  - B. One now contemplates phenomena in terms of the categories of the five obscurations (hedonic fixation, ill will, laxity and dullness, excitation and anxiety, and doubt). In each case one recognizes whether or not any of these obscurations are present, how the unarisen hindrance can arise, how it can be removed, and how it can be prevented.
  - C. The five dhyāna factors remove the five obscurations
    1. The factor of single-pointed attention removes the obscuration of hedonic fixation, which is like water mixed with various colors.
    2. The factor of well-being removes the obscuration of malice, which is like boiling water.
    3. The factor of coarse examination removes the obscurations of laxity and dullness, which are like water covered over by moss.
    4. The factor of bliss removes the obscurations of excitation and anxiety, which are like water rippled by the wind.
    5. The factor of precise investigation removes the obscuration of uncertainty, which is like turbid, muddy water.
  - D. One contemplates how to balance the five faculties of faith and intelligence, samādhi and enthusiasm, and mindfulness, thereby transforming them into five powers.
  - E. *Vajirā-sutta* [*Samyutta Nikāya* 5.10] on the analogy of the chariot
  - F. Nāgasena on the chariot analogy: *Milindapañhā*, 25
  - G. *Heart Sūtra*: “At that time, the Bhagavan was absorbed in the concentration on the categories of phenomena called “Profound Perception.” Also, at that time, the bodhisattva mahasattva Avalokiteshvara looked upon the very practice of the profound perfection of wisdom and beheld those five aggregates also as empty of inherent nature.”
  - H. Substrate → substrate consciousness → afflictive mentation → subtle and mentation → conceptualization of the world; ignorance → mental formations → consciousness → name and form → six sense bases → contact → feeling → craving → grasping → becoming → birth → ageing, sickness, and death

- I. Three modes of cognition: realizing the emptiness of inherent nature of phenomena; not differentiating between inherent existence and emptiness; grasping to the inherent nature of phenomena
- J. Three modes of dependent origination: dependence upon prior causes and conditions, dependence upon constituent parts and attributes, and dependence upon conceptual designation.
- K. Tsongkhapa proposed three criteria for establishing the relative existence of phenomena: “How does one determine whether something exists conventionally? We hold that something exists conventionally (1) if it is known to a conventional consciousness; (2) if no other conventional valid cognition contradicts its being as it is thus known; and (3) if reason that accurately analyzes reality—that is, analyzes whether something intrinsically exists—does not contradict it. We hold that what fails to meet these three criteria does not exist.”
- L. The Meditation
1. Settle the mind in its natural state as the basis for examining the origination, abiding, effects, and dissolution of all events, and then the three signs, observing those that seem to be yours and those that do not. Practice *śamatha* without a sign to observe the ground from which all phenomena emerge.
  2. Rest in the mental perception of whatever phenomena arise, observing how the conceptual mind conceives of objects and subjects, bearing appearances as their attributes; and observe how the deluded conceptual mind reifies the objects and subjects it conceives.

### Parallels in Modern Physics

- Sigmund Freud: “The problem of a world constitution that takes no account of the mental apparatus by which we perceive it is an empty abstraction, of no practical interest.” (*The Future of an Illusion*, 1927)
- Niels Bohr: “In our description of nature the purpose is not to disclose the real essence of the phenomena but only to track down, as far as it is possible, relations between . . . aspects of our experience.”
- Werner Heisenberg: “What we observe is not nature in itself but nature exposed to our method of questioning.”
- Anton Zeilinger: “One may be tempted to assume that whenever we ask questions of nature, of the world there outside, there is reality existing independently of what can be said about it. We will now claim that such a position is void of any meaning. It is obvious that any property or feature of reality ‘out there’ can only be based on information we receive. There cannot be any statement whatsoever about the world or about reality that is not based on such information. It therefore follows that the concept of a reality without at least the ability in principle to make statements about it to obtain information about its features is devoid of any possibility of confirmation or proof. This implies that the distinction between information, that is knowledge, and reality is devoid of any meaning. Evidently what we are talking about is again a unification of very different concepts. The reader might recall that unification is one of the main themes of the development of modern science.”<sup>1</sup>

- Thomas Hertog: “String theory gives you a multiverse, an ensemble of universes with different laws of physics which coexist in the theory simultaneously and which have certain relative probabilities determined by the laws of physics. You can think of that quantum reality a bit like a tree. The branches represent all possible universes, and our observations—we are part of the universe, so we are part of that tree—and our observations select certain branches, and hereby give meaning, or give reality, to our past in a quantum world...Quantum theory indicates we may not be mere chemical scum. Life and the cosmos are, in the quantum theory, a synthesis, and our observations now give in fact reality to its earliest days.”<sup>2</sup>
- John Archibald Wheeler:
  - “Useful as it is under everyday circumstances to say that the world exists ‘out there’ independent of us, that view can no longer be upheld. There is a strange sense in which this is a ‘participatory universe.’”<sup>3</sup>
  - “We find that nature at the quantum level is not a machine that goes its inexorable way. Instead what answer we get depends on the question we put, the experiment we arrange, the registering device we choose. We are inescapably involved in bringing about that which appears to be happening.”<sup>4</sup>
  - “‘Elementary phenomena’ are impossible without the distinction between observing equipment and observed system; but the line of distinction can run like a maze, so convoluted that what appears from one standpoint to be on one side and to be identified as observing apparatus, from another point of view has to be looked at as the observed system.”<sup>5</sup>
  - “It from bit symbolizes the idea that every item of the physical world has at bottom—a very deep bottom, in most instances—an immaterial source and explanation; that which we call reality arises in the last analysis from the posing of yes-no questions and the registering of equipment-evoked responses; in short, that all things physical are information-theoretic in origin and that this is a participatory universe.”<sup>6</sup>

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<sup>1</sup> Anton Zeilinger, “Why the Quantum? ‘It’ from ‘bit’? A participatory universe? Three far-reaching challenges from John Archibald Wheeler and their relation to experiment” in *Science and Ultimate Reality: Quantum Theory, Cosmology and Complexity, honoring John Wheeler’s 90th birthday*, John D. Barrow, Paul C. W. Davies, and Charles L. Harper, Jr., eds. (Cambridge: Cambridge University Press, 2004), 201-220, pp. 218-219.

<sup>2</sup> <http://www.tedxleuven.com/?q=2012/thomas-hertog>

<sup>3</sup> John Archibald Wheeler, “Law without Law,” in *Quantum Theory and Measurement*, ed. John Archibald Wheeler and Wojciech Hubert Zurek (Princeton, NJ: Princeton University Press, 1983), 194.

<sup>4</sup> *Ibid.*, 185.

<sup>5</sup> John Archibald Wheeler, “Beyond the Black Hole” in *Some Strangeness in the Proportion: A Centennial Symposium to Celebrate the Achievements of Albert Einstein*, ed. Harry Woolf (Reading, Mass.: Addison-Wesley, 1980), 361.

- “We have to move the imposing structure of science over onto the foundation of elementary acts of observer-participancy. No one who has lived through the revolutions made in our time by relativity and quantum mechanics — not least through the work of Einstein himself—can doubt the power of theoretical physics to grapple with this still greater challenge.”<sup>7</sup>
  - “It is wrong to think of that past as “already existing” in all detail. The “past” is theory. The past has no existence except as it is recorded in the present. By deciding what questions our quantum-registering equipment shall put in the present we have an undeniable choice in what we have the right to say about the past.”<sup>8</sup>
  - “Beginning with the big bang, the universe expands and cools. After eons of dynamic development it gives rise to observership. Acts of observer-participancy—via the mechanism of the delayed-choice experiment—in turn give tangible ‘reality’ to the universe not only now but back to the beginning. To speak of the universe as a self-excited circuit is to imply once more a participatory universe.”<sup>9</sup>
  - “We are participators in bringing into being not only the near and here but the far away and long ago. We are in this sense, participators in bringing about something of the universe in the distant past and if we have one explanation for what's happening in the distant past why should we need more?”<sup>10</sup>
- Steven Hawking and Thomas Hertog: “The top down approach we have described leads to a profoundly different view of cosmology, and the relation between cause and effect. Top down cosmology is a framework in which one essentially traces the histories backwards, from a spacelike surface at the present time. The no boundary histories of the universe thus depend on what is being observed, contrary to the usual idea that the universe has a unique, observer independent history. In some sense no boundary initial conditions represent a sum over all possible initial states. This is in sharp contrast with the bottom-up approach, where one assumes there is a single history with a well-defined starting point and evolution. Our comparison with eternal inflation provides a clear illustration of this. In a cosmology based on eternal inflation there is only one universe with a fractal structure at late times, whereas in top down cosmology one envisions a set of alternative universes, which are more likely to be homogeneous, but with different values for various effective coupling constants.”

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<sup>6</sup> John A. Wheeler, “Information, physics, quantum: The search for links” In Zurek, Wojciech Hubert. *Complexity, Entropy, and the Physics of Information*. (Redwood City, California: Addison-Wesley, 1990).

<sup>7</sup> Ibid. 363.

<sup>8</sup> Ibid., 194.

<sup>9</sup> Ibid., 362.

<sup>10</sup> *The anthropic universe” Science Show. 18 February 2006.*

- Physicist Hans Christian von Baeyer: “While the experimenter, the observer, and the theorist are investigating *something* external to themselves, what they are dealing with directly is not nature itself but nature reflected in human experiences.”
- Science writer Amanda Geffer: “QBism would say, it’s not that the world is built up from stuff on ‘the outside’ as the Greeks would have had it. Nor is it built up from stuff on ‘the inside’ as the idealists, like George Berkeley and Eddington, would have it. Rather, the stuff of the world is in the character of what each of us encounters every living moment—stuff that is neither inside nor outside, but prior to the very notion of a cut between the two at all.”
- Richard Feynman: “It is only through refined measurements and careful experimentation that we can have a wider vision. And then we see unexpected things: we see things that are far from what we would guess—far from what we could have imagined.... If science is to progress, what we need is the ability to experiment, honesty in reporting results—the results must be reported without somebody saying what they would like the results to have been.... One of the ways of stopping science would be only to do experiments in the region where you know the law. But experimenters search most diligently, and with the greatest effort, in exactly those places where it seems most likely that we can prove our theories wrong. In other words we are trying to prove ourselves wrong as quickly as possible, because only in that way can we find progress.”